

AMERICAN AGRICULTURIST,

FOR THE

Farm, Garden, and Household.

"AGRICULTURE IS THE MOST HEALTHFUL, MOST USEFUL, AND MOST NOBLE EMPLOYMENT OF MAN."—WASHINGTON.

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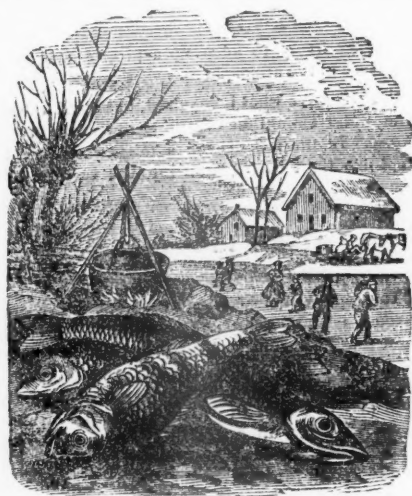
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American Agriculturist in German.

Each number of this Journal is published in both the English and German Languages. Both Editions are of the same size, and contain, as nearly as possible, the same Articles and Illustrations. The German Edition is furnished at the same rates as the English, singly or in clubs. A club may be part English, and part German.



Notes and Suggestions for the Month.

Why the Fishes (Pisces) should be the name of the Zodiacal sign for February, has puzzled even astronomers. A plausible theory is, that the constellations of the Zodiac were named in Egypt, about 2500 years before the Christian Era, at which time the groups of stars called, Aquarius (the Water-bearer) and Pisces, rose just after sunset in the months of January and February. During these months the Nile overflows its banks, hence the Water-bearer, and the Fishes would there be very appropriate names, and would naturally be chosen by Egyptian astronomers to designate those months.

Although in this latitude fishing is not a leading matter of interest in February, yet in many places, much amusement, and profit as well, can be enjoyed even while the ponds and streams are ice-locked and the merry skaters are gliding over the quiet haunts of the pike and the perch. These fish readily take the bait from lines lowered through holes cut in the ice, and a well prepared chowder, for which our artist has provided in his sketch, is a welcome addition to the pleasures of a skating party, with appetites whetted by frosty air and vigorous exercise.

It is an interesting fact, perhaps not generally known outside of scientific and sporting circles, that the young trout are hatched during the last of January and first of February. The

female deposits her eggs in a gravelly basin or bed carefully prepared by the male. He is constant to his mate while she is spawning, and will allow no stranger to approach the chosen domicile. The eggs are fecundated immediately after being laid, and the slow process of hatching consumes from eight to ten weeks, or more, depending somewhat on temperature. The eggs of some other fish require even longer periods: the salmon which appears in early spring requires five months for incubation. The breeding of fish deserves more than the passing notice, with which it might be here dismissed, were it only a matter for scientific inquiry or for affording occasional recreation. The rapid declension, and entire extinction in many streams, of a most valuable source of food is of no little importance, particularly, as experiments have shown that it may be remedied. In France, the government lent its aid to restocking the trout, salmon, and other home fisheries. All the accounts received have been favorable as to the success of the enterprise. Eight or ten years ago the matter was considerably discussed in this country, and several experiments were undertaken with various results. Enough however was accomplished to show the feasibility under proper management of again repopulating the cold-spring brooks with trout, the ponds with pike, perch, bass and other appropriate species, and the northern tide-water streams with the salmon whose finny ancestors once gave both sport and sustenance to the aborigines, and profitable employment to the first settlers from the Old World. We shall be pleased to publish facts tending to awaken a new interest in the subject, or if the enterprise be impracticable, to know the circumstances and reason of failure. Two obscure fishermen in France, skillful only in their craft, brought the art of pisciculture or fish-raising to its prominence in that country, and there is no lack of men or means on this side the Atlantic to improve upon their ideas and develop this new branch of industry here.

Work for the Farm, Barn, and Stock Yard.

Animals.—All the animals of the farm should be glad to see their owner, and in fact every other person who has to do with them. *Man* should be recognized as their best friend. Colts and steers particularly, should be petted and handled constantly. Treated thus, they will never need *breaking*. If there be a stable boy who plays with the horses by pinching or pretending to pinch their flanks, keeping himself out of the way of kicks and bites, no wonder they become vicious. The same boy in passing through the cattle yard will crack the cattle over the back with a fork handle if they are caught standing in the driest parts of the yard when he wants to pass. The result is always the same—a yard of wild cows and ugly steers to be afterward "broken" by fear and a goad. Feed roots to all classes of stock, particularly to

those which may be breeding, and by this means counteract the tendency to constipation.

Building.—Study to make changes which will save steps and afford decided conveniences. Paint lasts a great deal longer if put on in winter instead of in summer, and is less likely to be defaced by dust while in the green state.

Bulls.—Train young bulls to the yoke. In a single yoke or harnessed with gear, much labor may be done by a bull. He will be quieter for it, a better stock-getter, and much less dangerous in every way. A bull's will should always be controlled and his anger never excited. Insert a ring in the nose of unmanageable animals.

Calves dropped in February can seldom be afforded fresh milk. They should therefore be weaned as soon as possible, and fed with skimmed milk, clover tea and gruel.

Cows.—It is common practice to have cows come in about 40 to 60 days before they can be turned out to pasture. This makes March or even April, the calving time in this latitude. Still many cows come in in February. They ought to have good hay, a daily feed of cut roots slightly salted, and a little meal sprinkled on this. For a few days before calving they should be removed to a roomy stall or loose box to get a little at home in it. They should be looked after, but let alone unless in serious trouble. After parturition give a warm bran mash made with scalding water, and let the cow return to her ordinary feed, increasing the amount of roots and grain if the flow of milk is great, or exhausting.

Horses.—See hints in last month's calendar. If, as often happens in winter, a horse's coat is full of dirt and scurf which currying appears to develop but not remove, a change of diet is needed. If possible, feed roots, and also give free access to salt. In the absence of roots, bran wet with plenty of warm water may be a partial substitute, especially in cases of constipation.

Hired men, if not already provided for the season, should be secured in February. The best men are usually engaged first. See hints on page 47. Many immigrants are expected this spring, among whom will doubtless be some good farm hands. See Basket item on this topic.

Ice.—The "ice crop" has been unusually abundant; the character of the ice most excellent. Still more may be secured, if the weather is such as to keep it solid, or freeze it afresh.

Manures.—See sundry articles in this number on a subject so important both west and east.

Maple Sugar.—Several warm days will cause the sap to flow, and the first flowings are richest in sugar, so there should no time be lost, but preparations be early completed. See page 43.

Potatoes.—Keep seed potatoes in the coolest part of the cellar, secure from frost. Examine others, removing decayed ones, and rubbing off the sprouts that will start if they be kept warm.

Plowing can very seldom be done this month with profit. Very dry and porous soil may sometimes be broken up, however, and with advantage.

Poultry.—Examine carefully for vermin; grease, or better, whitewash the roosts. Clean out the nests, put in fresh straw, and whitewash the whole poultry house.

Roots are a substitute for green feed, which no good farmer ought to be without. Sort over all kinds, separating the soundest to keep latest into the spring. Feed the partially decayed and wilted at once. Be careful not to feed decayed turnips, rutabagas, or cabbages to milch cows—the milk will taste. Cook before feeding, all that are not entirely fresh and sound.

Sheep.—Some lambs intended to be marketed early, will be dropped this month. The ewes should be kept at night in tight, well ventilated stables, without much litter, for some time before and after yearning. Pregnant ewes should not be denied exercise, nor furnished with stimulating diet. Some turnips daily are very desirable. Exercise promotes health of the ewes, vigor of the lambs, and a full flow of milk—and the ewes must be forced to take it, in cold, snowy winters like the present one.

Swine.—Store pigs will often pay for their keep by the work they do on the manure, and the manure they will make if plenty of muck has been laid in. See that they do not pack the manure so hard that it will not ferment at all. Encourage them to work it over by dropping nubbins into holes made with a bar. A breeding sow, irritated by other animals, fed on corn meal, and withal a little constipated at the time of farrowing, is apt to be very cross and sometimes to eat her young. Prevent this by giving a daily feed of raw potatoes, or other roots, with bran or linseed meal instead of Indian, not allowing her to be disturbed, nor to become fat. Give a clean well littered sty, and watch her at the time and after farrowing, giving her a warm bran mash as soon as she will eat.

Wood.—Cut and haul fire-wood for next winter.

Wool.—See the report on wool market, elsewhere.

Orchard and Nursery.

But little out-of-door work can be done this month, except to afford the required protection to trees and shrubs. Great care should be taken to exclude stock of all kinds from the nurseries and young orchards, and to guard against a heavy accumulation of snow upon evergreens and shrubs.

During mild, thawing weather the trunks of old trees may be scraped and washed over with a strong solution of soft soap or weak lye. This will remove the moss and loose bark, and conduce both to the health and appearance of the tree.

Cions may be cut during mild weather, any time before the buds begin to swell: keep in a cool cellar in damp earth or moss. Root grafting, where it is carried on extensively, will afford sufficient indoor employment. Ample directions were given in January. Those who do grafting by contract are desirous of beginning their season as early as possible; but cions put in too early are exposed a long while to cold drying winds, and are less likely to succeed, than if inserted after vegetation starts.

Manure and compost may be hauled to places where they will be needed in spring. We have so often insisted upon the importance of sending orders to the nurseries before the spring's business opens, that we merely allude to it now.

Kitchen Garden.

As in the other horticultural departments, there is little to add to the suggestions given last month. Not much can be done at the North before March.

Cold Frames should have plenty of air on mild, warm days, and abundant protection on cold ones.

Hot-Beds. In nearly all the localities now reached by the *Agriculturist*, these will not be needed until next month. Every thing should be in readiness, with a good supply of long stable manure.

Horse Radish. This may be dug whenever the ground is thawed. If not marketed or used at once, cover with earth in the cellar to keep it fresh.

Pea Brush, Bean Poles, stakes and supports of every kind—procure them before the busy season.

Ichubarb. Small quantities may be forced by taking up roots and putting them in boxes of earth in the green-house, when leaves will soon be produced at the expense of the roots. It may also be forced in the beds, by placing a box or barrel open at both ends, over a plant, and then piling an abundance of fresh stable manure around it. A cover should be put on during freezing weather and at night.

Seeds.—It is vain to expect good results from poor seeds and we cannot too often repeat the advice to buy from reliable sources only. If you know no responsible dealer, send for a catalogue to some one of those who advertise with us, and order seeds by mail. The postage on seeds is only 2 cents per $\frac{1}{2}$ lb., and if it were much more, it would be cheaper to pay it than to buy poor seeds.

Tools.—It is not well to wait until tools are needed, before supplying deficiencies. Buy only the best. Get the lightest, if equally efficient. A few ounces weight in a spade, fork, or other tool, make a great difference in the comfort of using it. Make all needed repairs in advance.

Fruit Garden.

Make selections and send orders for such plants as will be needed. Make cuttings of currants and gooseberries, and bury them in earth or treat them as directed for quince cuttings on page 49. If it is intended to grow the bushes to a single stem, cut out all the buds from the part which will go in the ground. Neglected grape vines may be pruned during mild weather. Save the cuttings for planting in spring, by burying them in the cellar. In pruning, leave at least an inch of wood above the bud. Look out for mice and rabbits, which will often do much mischief. Tramp the snow around the plants to keep out the mice. It is said by several, that greasing the lower parts of the trunks will prevent trouble by rabbits. We have never tried it, but it has been asserted by so many that there must be some ground for the statement.

Flower Garden and Lawn.

The labor here is mainly anticipatory. Now is a good season to note where the introduction of evergreens would improve the appearance of the grounds. Have all plans for improvement well considered before the working season comes on.

Cold Frames.—Air every mild day; guard against frost on cold ones. Plants need very little water.

Evergreens.—Shovel away snow banks from around the lower branches of evergreens to keep them from being broken when the snow settles, and shake the accumulations from the upper branches while the snow is yet light.

Protection.—See that the straw, matting, earth or other protecting material for tender plants, is not displaced by any accident. If the Rhododendrons have not been covered, put up some kind of shelter, to protect them from the alternations of heat and cold which occur in spring.

Shrubbery.—This is often injured by heavy collections of snow in the branches, which should be shaken out before it becomes icy. Pruning and thinning out may be done in mild weather.

Trellises.—Make, repair and paint at this season. Aim at neat, plain, rather than fanciful forms.

Green and Hot-Houses.

The directions for temperature noted for last month should be observed. Ventilate whenever the external temperature is above 45°.

Annuals.—Sow seed of Phlox, Rhododendron, Nemophilas, and others intended for growing in pots. Where there is space, fill it with annuals.

Azaleas should now be in full glory. Give plenty

of water during the blooming and growing season.

Bedding Plants.—Put in cuttings for a stock to plant out in spring. A good supply of Verbenas, Lantanas, Ageratums, and the like, is always needed. See articles on propagating from cuttings, page 49.

Bulbs.—Bring forward from a cool to a warm and light place, a few at a time, in order to have a succession of bloom.

Climbers.—Lophospermums, Cobaea, Maurandias and others, to be started from seeds, may be sown.

Camellias.—Keep the foliage clean, but avoid wetting the flowers, as this will discolor the petals.

Carnations.—Propagate by cuttings. Give water more freely as they push their growth.

Fuchsias.—These having had their season of rest, may be cut back, repotted, and started into growth. If vigorous plants are wanted, cut back severely.

Insects.—If not watched these will get the mastery. Syringing will destroy many. Whale oil soap and fumigation must be used for the more obstinate. The Insect Powder sold at the drug stores, which is the powdered flower of a species of Pyrethrum, is said to be efficient, in powder or infusion.

Lantanas.—Bring into growth same as Fuchsias.

Pelargoniums.—Pinch back to get stocky plants. Give rich soil and plenty of water, with an occasional taste of liquid manure. Make cuttings now.

Re-pot all plants needing it. Give Gloxinias and Gesnerias plenty of pot room.

Syringe freely to keep up a proper degree of moisture in the atmosphere.

Water.—Give what is required, but avoid excess. The water should be of the temperature of the house. In the absence of a tank, water may be kept in a tight barrel, sunk into the earth, within the house.

Apiary in February.

Prepared by M. Quinby—By Request.

The period of inactivity with bees will extend through most of February, yet there will probably be a few days sufficiently warm to waken those standing in the open air. If snow is on the ground, which has lain long enough to be a little hard, the bees may be allowed to fly at pleasure. A warm day immediately after a fresh snow, will often call out the bees. They settle on the snow for rest, and in attempting to rise, they manage to make a hole deep enough to bury themselves out of the sunshine, and perish. Place a wide board on the sunny side of the hives, to shade and keep them as cool as possible. It is desirable to keep bees in by some other means than closing the hive, because as many will be likely to perish in vain endeavors to get out, as would be lost in the snow if let out. The thick wall of a straw hive, being almost a non-conductor of heat, is not much affected by a few hours of sunshine, consequently the bees seldom issue when the weather is unsuitable.... Before bees fly out and mark their locality, they should be placed on their summer stand. If any stands are to be changed, do it now. Have a separate stand for each hive, where there is room, and let them be at least six feet apart. If it is decided to pack the bees close together in a bee-house, let the hives be of different colors, alternating with each other. It is also important to prepare for rearing queens artificially, to supply the colonies that lose them in the swarming season.... Bees in winter quarters should remain as nearly undisturbed as possible. Should any become uneasy, as will be shown by some of them leaving the hive, and smearing their combs with feces, they should be set out of doors the first suitable day that occurs, for an airing, and returned again. They may be fed, if necessary, by inverting the necessitous hive and putting a little honey upon the empty combs.

The farmer whose pigs got so lean that they would crawl through the cracks of their pen, stopped their "fun" by tying knots in their tails.

Notes from the Fruit Growers' Meetings.

These meetings are regularly held at the *Agriculturist* office on Thursday at 1 o'clock, P. M. It is each month a matter of regret, that our space does not allow more than a mere abstract of the conversations.

E. Williams presented the Glout Morceau pear, which was generally conceded to be one of the best winter pears; does better as a standard than dwarfed on quince.

W. S. Carpenter was totally opposed to planting dwarfs, and considered that their introduction had done much to deter persons from cultivating pears. He now plants standards only, and had fruit as early, and in greater abundance than those who set out dwarfs.—Knew of a large plantation of pears on quince, set out a few years ago, and not a single tree remained.

T. W. Field was not devoted to the culture of dwarfs to the exclusion of others, but claimed that they had great merits, and that certain varieties like the Duchess, and others, were much improved and lost their grossness when grown on quince roots. The Louise Bonne did not make a good junction with the quince root, and the tree was apt to break off at the point of union.

W. S. Carpenter remarked that the quince stock should be budded low, and when transplanted, the junction should be two or three inches below the surface: If the trees have long quince shanks, don't try to set deep. He saw an orchard of long-shanked trees set 15 years ago, and not one is alive now. Regarding the forwarding of trees by budding on quince, his own, on pear roots, bore too soon, and too abundantly, and he gives a decided preference to pear roots in all cases; thinks thousands of pear trees would now be growing where there are hundreds, had it not been for the quince stock. He planted 120 trees 3 years ago (Bartlett's, B. D'Anjou, Paradise D'Automne, Fulton, B. Clairgeau, Lawrence and Howell) and had 300 to 500 specimens last season.—He saw an orchard of 1000 standard trees last fall, mostly Flemish Beauty and Buffum, 5 years planted, where the owner had not lost 5 trees, and had 25 barrels of fruit last season, with a promise of 100 barrels this year. We can get fruit in quantity sooner on pear than on quince roots.

Mr. Williams removes the earth from quince stock and buds low down; they always root near the surface. If a furrow is thrown against a quince tree roots push out into the fresh soil.

T. W. Field summed up in favor of the quince or dwarf pear tree: More trees can be grown on a small space; we get fruit sooner; the fruit is of finer quality; it hangs on better, and being nearer the ground is not liable to be blown off; a larger per cent of dwarf than of standard trees survive transplanting—he would not expect to lose more than 10 out of 1000 Duchess trees on quince, while 50 per cent is about the proportion of Bartlett's on pear roots which would be alive 5 years after planting.

Dr. Trimble said that 20 to 30 years ago it was not uncommon to see large and healthy peach trees bearing full crops every year; now three crops was all that peach trees would average and the same soil would bear only one crop of healthy trees. The most successful growers buy a new farm for each crop of trees. Yellows is an inherent disease, as much so as the scrofula in the human system, and the promiscuous planting of pits from unhealthy trees perpetuates it, though some soils, and some methods of treatment may keep it dormant, while others hasten its appearance. The best cultivators prefer a soil of only moderate richness. Obtain pits from Missouri, California, and parts of Europe where there is no disease, and we may still have healthy trees.

Rev. Mr. Van Doren of Morris Co. N. J. said his father carried choice peach buds from Morris Co. N. J. to Orange Co. N. Y. in 1812, which grew finely 7 years and then began to turn yellow, but were revived by a large shovelful of dry ashes put about the trunk of each tree. They grew another 7 years, and again showed the same disease, from which they were recovered by a double dose of ashes, and grew and bore 7 years longer.

Dr. Ward found ashes very beneficial to the peach and other fruit trees. They are probably benefited by the alkali of the ashes. He finds powdered charcoal heaped up around the trunks a good preventive against the borer. Mr. Van Doren prefers a whalebone probe for killing the worms in the tree—the knife mutilates.

W. S. Carpenter attributes the yellows to worms, starvation, etc.; he does not believe it an inherent disease.

The discussion here turned on the influence of the original soil on the future growth of the tree, with special reference to transplanting from a sandy to a clayey soil and *vice versa*. The conclusions arrived at were, that it was essential that the tree be provided with fibrous roots, and show a healthy vigorous growth, no matter what soil it is taken from; a medium, or lightish loam is best for furnishing such roots.

Mr. Carpenter had received and planted trees from nearly all parts of the world, and did not care whether grown on clay or sand if only thrifty in appearance and well provided with fibrous roots.

A. S. Fuller thinks plenty of barn-yard manure will make any tree vigorous regardless of the soil; don't believe in special fertilizers—the tree will find sufficient pabulum in ordinary barn or stable manure, though a sandy soil would be benefited by a good coating of muck. Barn-yard manure should be well rotted—don't believe in heavy manuring for fruit; better not induce the growth than have to cut it off afterward. Undecomposed manure, spread on at time of fruiting, imparts a disagreeable flavor to fruit, especially grapes, besides tending to burn the lower leaves. We want just enough vine and leaves to perfect the desired amount of fruit.

E. W. Mattison of this city, presented 5 pears, raised in California by R. G. Moody, of San Jose. The 5 weighed 13½ lbs; the heaviest specimen was originally 3½ lbs. The size was the only thing remarkable, they being coarse and flavorless. The variety was not recognized.

Dr. Ward showed a model of his famous Duchess pear, raised in Newark, N. J., a few years ago, and believed to be the largest pear grown in the Atlantic States; weight when plucked, 35½ ounces.

Solon Robinson read a letter from Indiana, objecting to leaving naked trunks to fruit trees, six to eight feet high. In that vicinity a disease attacks the south west side of nearly all fruit trees, and cultivators are planting with low trunks to remedy the disease. Others allow sprouts from the roots to grow up and shade the trunk. The writer thinks a man should be satisfied with a crop of fruit without taxing the soil for a crop of grain besides.

Dr. Ward had noticed that cherry trees, especially when on the south side of buildings where there was not a free circulation of air, were frequently killed; he thinks low branched trees might remedy this.

W. M. Doty said trees were troubled at the West with this disease, which he attributed to sudden changes of temperature from warm sunshine to freezing; thinks the trunk must be shaded or sheltered by something besides branches, which in winter afford very little protection.

A western pomologist present thought low heads preferable for prairie regions, and that thorough mulching was better than cultivating the ground.

A. Parrish would not plant apple trees for cattle to browse, hence if cattle are to have the range of the orchard, the trees should be trimmed high up, though the practice was all wrong. There is a difference with sorts: 18 inches was high enough for the trunk of a Northern Spy, while some drooping sorts should be trimmed 6 feet.

Mr. Field would as soon turn cattle into a cabbage or corn field as into an orchard.—Approves of low branching trees for three reasons: the tree bears much sooner; the lower branches are those which usually bear first, and if cut off, more time is needed for others to acquire a bearing age; fruit can more readily be thinned and gathered from low heads. Wind touches low trees more lightly, and if fruit does blow off, it does not fall so far.

Solon Robinson remarked that the disease or decay of the south-west side of fruit trees was the principal thing the southern fruit grower had to contend against. It was attributed to sudden changes of temperature.

Fruit Notes from Connecticut.—E. T. Bull, N. Haven Co., Conn., says that the Pawpaw grows and fruits in that place and he thinks nurserymen should introduce it. Mr. B. thinks that the Flemish Beauty is the best standard pear for a light warm soil, and observes that the Baldwin apple if grown on heavily manured and cultivated ground, becomes so sour and coarse-grained as to be nearly worthless.

Farm Help from Newly Arrived Immigrants—Facts for Western Farmers.

An average of 3,000 people per week arrive at this port—156,000 during 1863. The majority are good farm help, and ready to settle in any part of the country. Some time ago the Commissioners of Emigration, who have a care for all these people when they first arrive, undertook to send farm help, men and women, to the West on condition of receiving from responsible parties, money enough to buy tickets through to their destination. The result was, that only about one-fourth reached those who pre-paid their fare, and not even one-half left the State of New York. Entire ignorance of distances and customs in this country, credulity and stupidity combined, led the immigrant to consent to leave his route, with companions who stopped on the way, or to hire himself to another party. This practice was therefore given up. Still, however, the Commissioners wish to assist the immigrant to find his way westward, and to help Western farmers to secure good help. It must be done as suggested on page 47. Farmers in the same district should select one or two good men, give them credentials from responsible and well known parties, as a guarantee to the Commissioners that they are honorable men, and that the immigrants will be well cared for. These agents should come to New York, select desirable single persons of

either sex, or families, and then go with them all the way back. Superintendent Casserley says this is the only way, and that correspondence with the Commissioners will elicit no further information. They are strict in allowing none but persons of thoroughly responsible and honorable character to communicate at all with the immigrants, if they can help it. There is always considerable choice among those continually arriving. Five lines of steamers besides numerous sailing ships are constantly landing their living freight at Castle Garden. The effects of the derangement of the system of labor in the "Border States," are already influencing a great diversion thither of emigrants who have hitherto gone westward. The South is soon to compete with the West, for the flood of immigration which is likely to increase in view of the probable settlement of our own difficulties and the very unsettled state of Europe. It therefore shows a very great want of sagacity on the part of those who manage the railroad interests of the West, that just at this time they should raise the fare on emigrant trains. The West should remember that the South offers an old country, a very genial climate, great variety of productions, and no slavery to degrade labor. Almost the only advantage in favor of the West, clearly apparent to the emigrant, is facility of transportation, which ought not to be decreased.

Producing Animals of either Sex at Will—Important Experiments.

Every animal and plant grows up from a single, simple cell, produced by the female.—This is called in plants an ovule, and in animals an egg. (For some account of cells see page 48). Independent vitality and organization is imparted to this cell, by contact with a product of the male plant or animal. This is called impregnation. In all, except some of the lower forms of animal life, the male, and females are distinct individuals. They are equally distinct in many plants.—Perhaps no power is more desired by breeders of farm stock than the ability to cause the production of either sex at will. Some time ago Prof. Thury of Geneva made some very important investigations and arrived at conclusions, which if demonstrated, will be recognized as of immense importance. He submitted his views to the Academy of Sciences, and a commission was appointed to verify them. So far as we know this commission has not yet reported—but J. A. Barral, the well-known agricultural writer and editor has published a statement which we find translated in part in the Country Gentleman. From this we learn, that Prof. Thury asserts that the sex of the future animal (or plant) is settled by the maturity of the cell (ovule or egg) at the time of impregnation—a very mature cell producing male, and one less mature producing female offspring. Thus, when an animal comes in heat, the egg, though mature, is much less mature than toward the close of this period. In accordance with this theory he advises, that when heifer calves are desired, the very earliest period of a cow's coming in heat should be taken advantage of—and if a bull calf is wanted, the latest practicable moment. A series of experiments are cited, made by a son of the president of the Ag'l. Society of Southern Switzerland, in Canton Vaud. This farmer had a herd of Swiss cows, and used a Durham Short-horn bull. He obtained heifer calves in 22 successive cases. Wishing to raise 3 yokes of steers, he selected cows of similar color and form, and bred with this object in view. The result was, six bull calves, well mated for working cattle. His own words are: "I have made in all 29 experiments by the new system, and all have given the product sought, male or female, without a single instance of failure. These experiments were all made by myself, and I regard the system as perfectly correct and sure." We commend it to the readers of the *American Agriculturist* for experiment, and hope to have reports of its success or failure.

Notice to Certain Agricultural Editors.

It is said that a certain devout member of the Friends' Society, was several times misused by a bluff neighbor, but he carried out his principles of non-resistance, until "forbearance ceased to be a virtue." Finally the assailant met him one day, struck him on one cheek, and bantered him to turn the other. The Quaker did so, and received a second blow. "Now" said he, "I have fulfilled the law, and I shall give thee a thrashing,"—which he did. We should be tempted to take the same course with certain jealous contemporaries who indulge in all sorts of unmannerly hints and false innuendoes; but the fact is, our time and space can be put to better use. The engineer of a mammoth rail-road train filled with live passengers, cannot "whistle down the brakes," and have a set-to with every snarling whiffet, nor even with the rural mastiff, that chooses to bark at the passing cars. Our rule is, to seek pre-eminence by earnest attention to the pages of our own paper, and not attempt to rise by trying to pull others down.



Containing a great variety of items, including many good hints and suggestions which we give here in small type and condensed form, for want of space elsewhere.

Newspaper Mail Burned.—There were two fires among the mail bags, about the time our December and January numbers were sent out. As near as we can judge, our papers mainly escaped. If, however, from this or other causes, any subscribers failed to receive any of these numbers, they will please notify us.

Unanswered Letters.—During six weeks past, from five hundred to two thousand subscriptions to the *American Agriculturist*, have been received daily. With them have come many queries, hints, and suggestions, for which we are thankful. A thousand or more of these are answered or referred to directly or indirectly, in articles or items in the present number, and the others will receive the earliest possible attention. Let the material still accumulate; it will keep well, and be turned to good account. A large number of letters on personal matters, requiring answers by letter, have also come to hand. Several hours daily and nightly have been devoted to such, but many are yet unanswered, simply because there are not hours enough in the day.

No Seed Distribution this Year.—Our annual custom has been to offer free to all our subscribers, a large assortment of field, garden, and flower seeds. In this way millions of parcels have been scattered over the land, and the multiplied products are to be found in almost every county and town from Maine to California. This year we must forego this pleasant custom, for four reasons: 1st. The severe drouth greatly deteriorated our growing seed plants; 2nd. The more than doubled cost of importation, deters us from getting the usual assortment of choice new seeds from Europe; 3rd. The greatly increased cost of printing paper, etc., leaves too little margin of profit for the expense; and 4th. The strawberry plants involve all the trouble we can manage this year.

Convention of Cheese Diarymen.—Pursuant to a call signed by some forty proprietors of "cheese factories," this convention was held at Rome, N. Y., January 6th. There were present a very large number of those interested, chiefly from Central and Western New York. The cheese factories represented, consume the milk of 40,000 cows. Various processes of cheese making were discussed. A plan for a State Association was presented and adopted. The officers elected were: *President*, Hon. George Williams, Oneida Co.; *Vice Presidents*, Col. Seth Miller, Lewis Co., D. Hamblin, Jefferson Co., A. L. Fish, Herkimer Co., J. E. Morse, Madison Co., Moses Kinney, Cortlandt Co.; *Secretary*, William H. Comstock, of Utica; *Treasurer*, R. R. Lyon, Lewis Co. More than one hundred members joined the association. Any person becomes a member by payment of one dollar. It was decided that the association would not establish an agency in New York city. The officers are expected soon to issue in pamphlet form the reports had from numerous cheese factories, in connection with other valuable information. This is an important move, and if not prostituted to mere speculative ends, will be of very great value to the country at large, and particularly to the great dairy regions of New York.

Health of 'Squire Bunker.—In answer to many anxious inquirers about the health of our old correspondent, the Yankee 'Squire of Hookertown, Conn., we are happy to say he is well and will doubtless be heard from in the next *Agriculturist*—perhaps (like an old razor), all the shrewder and sharper for having been off duty for a few months.

Grape Queries.—"W. H. D.," Rochester, N. Y. See page 325 of November *Agriculturist* for list of market grapes. The Delaware and Clinton are as far as known the only really hardy wine grapes. The Concord has a reputation as a wine grape in Missouri, but little is known of it, in this respect, at the North.

Canada Postage on Seeds, etc.—As stated last month, packages of seeds, cuttings, bulbous roots, and clones or grafts, are posted in Canada for delivery to any address within the Provinces or in the United States, by pre-payment with postage stamps, at the rate of one cent per ounce. Such packages received from the United States are charged the same rate, on being delivered. The parcels are not to exceed 16 ounces. No communication, other than the address and a statement of the nature of the contents, can be written or printed on

the parcel or enclosed in it. It must be put up so as to admit of easy examination of its contents. If in bags, they must be simply tied at the neck so as to admit of inspection if desired. We understand that this does not cover United States postage on such parcels as are sent from this country, our law requiring all such parcels to be pre-paid, wherever they may be sent to. Dealers and others here will of course pre-pay the United States postage, and Canadians will only need to pay their one cent per ounce. This will give the two countries excellent facilities for interchange of seeds, plants, etc. We can hereafter send our strawberry plants, and other articles, to Canada subscribers, the same as to those in the U. S., without the fear that they will be sometimes taxed \$3.20, instead of 16 cents per lb.—Books, book manuscript, proof sheets, maps, prints, drawings, engravings, photographs, printed or written sheet music, go at the same rate as seeds, if no glass be in or about the package. The above applies only to Upper and Lower Canada, but we hope to soon announce a similar liberal policy in the Post Office Departments of the other British Colonies.

The Agriculturist at the South.

Before the breaking out of the war, this Journal circulated considerably in the Southern States—but in no region so largely as in Eastern Tennessee. The war cut those all off for a time, but almost the first through-mail has brought back renewals from points previously inaccessible. The following is one of this class:—"Chattanooga, Tenn., Dec. 25. Dear Sir: Enclosed please find \$1 for the *American Agriculturist* for 1864: it will be a welcome New Year's Gift, after having been so long deprived of it."—Our circulation at the South lost by the war, has been more than made up elsewhere, but we shall gladly welcome back our old subscribers in Tennessee and other regions, as fast as communication is opened.

Land for Sale and to Lease at the South.

The Commissioners appointed by Government, are selling land of rebels for the taxes, at rates but little higher than Government wild land. Officers appointed for the purpose, in the cotton and sugar districts, lease plantations under certain conditions to men who come well recommended. Concerning lands in South Carolina and Florida, information may be had by writing to Brig. Gen. Rufus Saxton, Beaufort, S. C. Or a letter to Secretary Usher, of the Department of the Interior at Washington, D. C., would probably bring out the facts relative to all such matters.

What Books to Buy.—Many who wish to add to their stock of information—a praiseworthy desire—ask us to tell them by letter what books to buy on certain subjects. This is not possible. Our book list on page 62 will give pretty good information. The most esteemed works are marked with a star (*); some are doubly starred, to express their high value. But few really good books are published in the world.

Sundry Humbugs.—We hope our readers are by this time too wide awake, and too well informed, to need a lengthy notice of the many new swindles coming out; they will especially abound, as the planting season comes on. Look out for any number of wonderful plants that will be set forth as of surpassing excellence by advertisements and circulars. Our humbug drawer is packed full of such circulars, all sent in by subscribers, which we have not room to notice now. Among them are: A Philadelphia-Nevada-Mining-Company, issuing shares at \$2.50 each, the operators of which only give information through the Post Office, and are hard to get hold of. Grant, Harris & Co's "Merrimac (N. H.) Joint Stock (swindling) Company." "Shelby College Lotteries," prizes of which are paid by New York "Bankers" whom nobody here knows. Geo. W. Moore's Dacosta N. J. cash and watch operations. Thomas G. Browne's Bronxville, N. Y., humbug "Cosmopolitan Art Union" prizes, who is so honest, and generous, as to offer to send you \$200 for \$10,—the old dodge of writing a letter about mislaid letters, ticket "1649", and offering to lie for you. A Cedar Street concern, seeking agents ("the same old coons"). "A Fortune For All" offered in half a dozen places. "Oriental Sugar Plant" turned up again. "Prof." Weslock's filthy private propositions to young men, already noticed. "Northern Honey", "Health Associations", etc., etc., etc., etc., etc.

White Willow Fences.—In the December and January numbers, we gave the results of the observations of our intelligent and trustworthy Associate, who made a thorough reconnaissance of the region where the willows have been most largely tried at the West. He went expecting to have little good to say of them, but was happily disappointed. Having no pecuniary end to subserve, he had not the slightest motive to describe them otherwise than as he found them. But while we

hope much for the willow, yet in this, as in all other new enterprises, we advise farmers not to rush into their cultivation too hastily. When good cuttings of the true variety can be obtained from parties known to be reliable, it will be well to try a small number at first and to extend the culture, if the soil is found adapted to their growth, as fences or wind-breaks. A good many advertisements have been sent to us, most of which we decline because we know nothing positive respecting the reliability of parties offering them. One of those advertising them, Mr. Pike, was recommended to us as a reliable and responsible gentleman, in a recent letter from one of the corresponding editors of the Rural New Yorker.

What is the Matter in Western

York?—During several weeks past, subscriptions have been coming in great numbers from all over the "Genesee Country" and Upper Canada. Nearly 200 names were sent the other day from a single Post Office just out of Rochester. We hardly know how to account for this, as we have no agent there, and have not sent a single show-bill, circular, or advertisement into that region for a year or more, thus respecting the pre-emption or "squatter rights" of others. Perhaps the farmers there have in some way heard that one of the Editors of the *Agriculturist* was brought up on a farm near the Canada line, and knows by experience what is needed thereabouts. Perhaps it is in part due to the gratuitous advertising of our strawberry and other premiums by a Weekly contemporary, while contrasting them with his own premium offers.

The Largest Hog ever Seen in

America.—An immense hog was killed in this city Jan. 12th, by Lippincott & Martin, butchers, 511 Tenth Avenue. He was freely exhibited, while alive, by his feeder before the door of the *Agriculturist* and other newspaper offices, and excited much interest. Mr. A. H. Benham, of M'Lean, Tompkins Co., N. Y., by whose judicious management his weight reached the enormous figure of 1355 lbs., has been careful to have his weight repeatedly taken and certified to under oath. In February, 1863, he weighed 1120 lbs.; in October 1276 lbs.; December 19th, 1340 lbs. and December 29th, when he left home for the Metropolis, 1355 lbs. He fell off rapidly during the fortnight which intervened before he was slaughtered, and did not feed well, but was active, stood and walked in a very unusual manner for so fat an animal. When killed, January 12th, his live weight was 1272 lbs.; dressed weight 1174 lbs.; offal 73 lbs.; blood 25 lbs. Through the courtesy of Mr. Benham we have secured the skin, and placed it in the hands of a skillful taxidermist to be prepared and "set up" in a life-like form, and placed in the office of the *Agriculturist*, where it will stand as Mr. Benham's challenge to the World. It will be finished early during this month.

Worms in Colts.—John Bennett, Ripley Co., Ind. The symptoms you describe are those of worms—but the only proof of the presence of these parasites is ocular demonstration. This you have, but you omit to describe the appearance of the worms. Turpentine is the old remedy for tape-worm, the dose being for colts 4 years old and under, as many half ounces as the animal is years old—1 oz. is not too much for a colt 6 months old; but pumpkin seeds are now the favorite remedy for human patients and why should it not do for horses. Try it. Mash the seeds and give them to the colt in the morning, after his fasting 24 hours; follow this with a purge of some sort—6 drachms of pulverized aloes, and 10 ounces of ginger, with enough honey or molasses to roll them into a ball, will do. This may bring away other worms too. For round worm: 2 drachms of tartar emetic given to a full grown horse every morning for several days, in a ball, is recommended, for pin worms injections of train oil and of brine are advised. We have not had much experience with these pests.

How to Feed Turkeys.—A Lady subscriber of Montgomery Co., Pa., describes her method of feeding Turkeys, for the *Agriculturist*: A trough is made by nailing two boards together with end pieces extending 3 inches above the trough; upon these nail a cover. Set this trough firmly on legs 2½ feet from the ground. The Turkeys can reach it and get their heads in. Chickens cannot; neither can they better their condition by flying up upon the trough. She adds "I keep corn or mush always in it and the turkeys eat whenever they are hungry, and will fatten much sooner than when the feed is thrown on the ground. I have fed over 50 the past season, the young ones of which weighed, gobblers 18 to 23 lbs., hens 12 to 15 lbs, and they were not of the large breed either."

Josiah Carpenter's Commission

House.—Those who have recently addressed us in regard to this, will please refer to Mr. Carpenter's Card or Letter, in the advertising columns.

Lime and Sorrel.—"B," of Cecil Co., Md. Your argument looks reasonable, but, though we hold with you that lime is a great help in ridding the land of sorrel, yet we have seen land well limed again and again, still full of sorrel—and have never yet known the treatment recommended on page 364 last volume, viz: with lime, barn-yard manure and good tillage, to fall in subduing sorrel for several years. We propose your query to the readers of the *Agriculturist*.—"Does sorrel ever abound on limestone soils?"

Book on Compost-heaps.—**Reading Farmer.**—A reader of the *Agriculturist* writes from Dutchess Co., N. Y.: "Please inform me through the *Agriculturist*, what good work there is on the making of compost-heaps. Also whether you think much good can be derived from the reading of agricultural works, such as Liebig's new one on the 'Natural Laws of Husbandry.' My friends laugh at me for studying farming. I am not a practical farmer as yet, but will be, I hope, in the course of six months, and I want to be an enlightened one." Very good—stick to the reading, but don't neglect to learn from both good and bad practice. *Johnson on Manures*, is the best book that we know of on the treatment of muck and peat in compost heaps. Price 75 cents.

Canada Thistles.—J. M. Wylie, Windham Co., Conn., reports that he commenced war upon a patch of thousands, cutting them with a hoe on the 6th and 7th of July. The first assault reduced the number to about two hundred; after the second attack but three survived, and these gave in after the third year's good hoeing.

Brahma Pootras.—Mr. O. H. Pick, Melrose, Mass., writes to the *Agriculturist* that he has kept various breeds of fowls, and considers these superior to all others, and that his neighbors are of the same opinion. Their flesh is white and tender, and excellent for the table. He says that they lay larger eggs and more of them during the year than any other sort. With the thermometer varying from 5° below to 15° above zero he has averaged 9 eggs a day from 12 laying hens. Feeds corn, oats, beef scraps, and boiled potatoes, and gives plenty of water, and clam-shells or bones. His hens weigh from 5 to 8 lbs., and the cocks 10 lbs. each.

Renovating an Orchard.—"Young Farmer," proposes to renovate an old orchard, by spreading fine manure this winter, giving a shallow plowing in spring, and planting potatoes in every third furrow. When the potatoes are matured, he will turn in hogs enough to root out and eat the potatoes.

Powder for Insects.—"J. T. W.," Voluntown, Conn., does not trouble himself about the Persian or any other insect powder, but uses gunpowder to repel the raiders. Early in the morning, when the tent-caterpillars are all in camp, he takes a gun charged with powder only and at a short range—two or three feet—he lets drive at the enemy which is reported as "killed, wounded and missing" without injury to the tree. Boys! stop shooting harmless and useful robins and try caterpillars.

Heeling in Fruit Trees.—"W. K.," Decatur, O. If properly heeled in, trees will keep perfectly well. It is practised when trees are received before the planter is ready to set them, or whenever it is necessary to keep them out of the ground for a greater or less time. Persons in regions subject to heavy winds prefer to get their trees in the fall, keep them heeled in through the winter, and set at the earliest practicable time in the spring.

New Tree Protector.—F. Roys & Co., East Berlin, Conn., have sent us samples of tree protectors which will doubtless prevent the attacks of mice and rabbits. They are of various sizes, and made of sheet iron in the same way as a stove pipe, except that the turned over portion which holds the edges together is not fastened, but may be locked or unlocked at pleasure. They are coated with some kind of cheap paint and if properly cared for will last several years. Cost about \$7 per 100.

What Apples for Ohio.—"M. C. A.," of Ansonia, State not given, but probably Ohio, wishes to know what four kinds of late keeping apples to plant. The choice will depend much upon where the fruit is to be marketed as well as local peculiarities only to be learned by the experience of others in the immediate neighborhood. The White Pippin, Wine Sap, Rambo, Yellow Bell Flower, and others do well in most parts of Ohio.

A Hardy Hedge.—O. K. Wilmouth, Kent Co., Mich. The Norway Spruce is perfectly hardy, quick-growing, and bears cutting well. The Hemlock hedge referred to was probably the Arbor Vitæ, commonly known in your State as White Cedar. It is very

abundant in some parts of Michigan, and young tree taken from the woods do well. The Norway Spruce is the best of the two.

Osage Orange Seed.—B. Leone, Lee Co., Ind. The tree grows most abundantly in Eastern Texas and along the Red River, in portions not yet occupied by our forces. One going to Matamoras for the seed would be quite as far off, in point of time at least, as Indiana. The common name of the tree in Texas is "Bodock" which is a corruption of *Bois d'arc* a term which was applied to it by the French settlers, meaning bow-wood. It is never called Mezquit in Texas, that name applying to a different tree, one much resembling the Honey Locust.

Plants Described.—W. T. Grimes, Gallatin Co., Ill. It is usually difficult to recognize flowers from descriptions, unless they are accurate botanical ones. We will try the seeds sent, and would like some bulbs of the Lily-like plant.

A Plant for the Shade.—J. M. Geist, Lancaster, Co., Pa., wishes a plant to grow in the shade where grass will not form a turf. Try the common Periwinkle, (*Vinca minor*), often and improperly called "Myrtle." This spreads quite rapidly and makes a tolerably dense covering of green.

Plant for a Name.—J. W. Smith, Decatur Co., Ind. The leaf is apparently that of the Carri-on Flower, *Smilax herbacea*, a native and a troublesome plant, which should be eradicated wherever it occurs. The greenish flowers appear in June and give out a most disagreeable stench.

Tuberoses.—"Inquirer." It is customary to buy imported bulbs, as our season is not long enough to perfect them. Offsets are to be broken from the old imported bulbs before planting. It is said that offsets formed during the summer will bloom after three years cultivation.—We have not tried it.

Book upon Green Houses.—Ph. Giles, Eden Gardens. W. C. Leuchar's Green and Hot Houses is the only work specially devoted to the subject. It treats of the construction, warming and ventilation of plant structures. Sent by mail on receipt of \$1.25. We know no work which gives directions for the building of houses and the treatment of plants. McMahon's American gardener, price \$2.50 gives the details of the management of green-house plants.

Flower Seeds for Rhode Island Children.—The "Rhode Island Society for Encouragement of Domestic Industry," has undertaken to give, so far as possible, some flower seeds to all the children attending public schools, and to this end solicits contributions of flower seeds, to be sent to their rooms, Railroad Hall, Providence R. I. The object is most worthy. Children all love flowers and this love, if cultivated, will bloom in refined tastes and give happiness in after-life.

Seed Catalogue.—That of J. M. Thorburn & Co. of 15 John St. N. Y. is the first one of these interesting annuals that has reached us. Upon looking it over we find that it includes the new as well as the old and proved varieties of garden, field, fruit, and other seeds.—One new feature is worthy of special commendation, namely, a table calling to mind the various vegetable seeds to be sown in each month. The Catalogue is sent by mail on application.

Skaneateles (N. Y.) Farmers' Club.—Officers elected Jan. 2d, for one year: Pres't, Dor Austen; Vice Presidents, Alford Lamb, Christopher C. Wyckoff; Recording Secretary, Chancey B. Thorn; Corresponding Secretary, William R. Willets; Treasurer, William J. Townsend; Directors, Willis Clift, George Austria; Directors holding over, Squire M. Brown, William E. Clark, John Davey, Jacob H. Allen.

Treatment of Bee Stings.—Many persons suffer so little from bee-stings, that they fear them no more than mosquito bites, and this is usually the case with our most successful apiarists. Others (like the writer) suffer severely; the slightest sting produces large swelling and great pain. On this subject, W. N. Côté, the Paris correspondent of the Medical and Surgical Reporter, writes: "The organ with which bees inflict their sting consists of two barbed, or rather, serrated darts issuing from a sheath and placed back to back, so as to leave a groove between them. The sheath is encased in nine cartilaginous scales provided with muscles, eight of which perform the duty of pushing the weapon out, while the ninth draws it back. To increase the pain caused by the mechanical action of the dart, a poison is secreted

from two bladders situated on both sides of the intestines—and it is this poison which causes the formation of a small pimple of an erysipelatous redness. This generally disappears in a few instants, but, sometimes, when several stings have been inflicted at a time, or when even a single one has injured a nervous filament, the inflammation is rather severe. In such cases, Dr. Latour proposes the following treatment: 1. To pull out the sting, which generally remains in the wound. 2. To bathe the place with ice water, or else acetate of lead, or ammonia. 3. To apply an impenetrable coating of collodion, rendered elastic by the addition of one tenth part of castor oil, whereby the production of heat in the living tissue is prevented and inflammation avoided."

Riddance of Rats and other vermin may be secured by the use of the Phosphoric Paste. It is a slow poison and sure. After eating it the rats leave the premises to die; they seldom die about the house.

Railroad and Steamboat Disasters. The number of serious accidents on railroads last year, in the United States, is reported at 953, of which 264 resulted in death and 671 in wounds. This does not include accidents to individuals caused by their own carelessness or design, or deaths and injuries resulting from the recklessness of persons in crossing or standing upon railroad tracks when trains were in motion.—The total number of casualties by steamboat accidents during the year was 340, by which 255 persons were killed and 85 wounded.—These figures look large, but can anybody estimate how much larger would have been the number of casualties, had all these persons travelled the same distances, drawn by horses in stage coaches, over common roads? Stage accidents occur one by one, and create no general sensation, and a summary is never published. There is no doubt that railway travelling is by far the safest mode in existence, even with its great rapidity. The road is smoother, and the "horses" not self-willed, but under the control of the driver—if he is sober.

War Maps.—We have received from H. H. Lloyd & Co., several very good maps, among them one which shows at a glance, and in an interesting form, the progress of the war, the original and the present territory occupied by the rebels, the battle fields, etc. For particulars, see advertisement. Note that this is H. H. Lloyd & Co., 81 John-st.—a prompt and responsible House, we have every reason to believe.

Lamps without Chimneys.—We have tried and liked, and then disliked, so many varieties of lamps for burning carbon or coal oil without a glass chimney, that we are afraid to say a word in favor of any of them. The best one we have seen, thus far, is Hutchinson's. It works very fairly. A perfect lamp for burning the economical coal oils now so generally used, if cheaply made, would bring a fortune to the inventor.

Black Currants for Wine.—"Young Farmer," Shelly, N. Y., asks if it will pay to cultivate the black currant for "wine." We never knew so-called wine to be made from this species. Perhaps others have. See last April number for article on Tobacco, or the Tobacco Essays advertised elsewhere.

"Sambuci Wine."—E. S. Collamer, D. C. This is a mongrel name, part Latin and part English. *Sambucus* is the Botanical name of the Elder genus and is derived from the Greek name of an ancient musical instrument supposed to be made from Elder-wood. There is no such grape as the *Sambucus* grape. We have no knowledge of the wine in question except from the circulars of the makers who, if we recollect rightly, claim to have imported the European Elder for the purpose of making it. This Elder, the juice of the fruit of which is much like that of our Elder-berry, is largely used to adulterate port wine—indeed all red port is colored with it. This with other fruit juices will furnish an alcoholic liquor which passes for wine with those who know no better.

The "Wine Plant."—Beware.—It is necessary to again caution the public against the operations of a class of speculators, who are swarming through the country, carrying samples of "wine" and selling Rhubarb or Pie-plant roots at enormous prices, claiming that these roots will, in a single season, produce several thousand dollars worth of "wine" to the grower. A species of alcoholic liquor can be produced from almost every known plant, by fermenting with the addition of sugar. The juices of the Rhubarb stems can be used, and with proper manipulation, make a passable liquor, flavored somewhat by the plant, or, "as you like it," by the addition of drugs. But it is sheer humbug to claim that a valuable high flavored "wine" can be produced directly

from the Rhubarb. Nor can a liquor be made which responsible parties will positively contract for in large quantity at \$2 per gallon, or even much lower figures. Some of the speculators may offer to take a little, in order to sell their roots. They are buying up all the Linnaeus Rhubarb plants in the country, if they have not already done so, at various prices, from \$1.50 to \$3 per barrel—latterly at \$10—and at \$18 to \$50 per 1000 roots, and then working them off as "wine plants," at \$250 to \$400 per 1000! It takes good strong roots until the second season after planting, to produce a fair crop of stems. If picked at all the first season, the roots will be worth little the next year.—A dozen Rhubarb roots in the garden are valuable to yield early pie material—but as a "wine plant" they are of little account.

"My Cows Shrank their Milk from eating either oat-straw, or acorns. Neighbor A. says, straw. Neighbor B. says acorns. Which was it?"—If cows in full milk were changed from good feed to oat-straw alone, A. is right. If they were well fed and oat-straw constituted a part of their feed, previously, and the acorns were extra, then B.'s theory is correct.

Bad Habits in Horses.—Revillo Rice, Oswego Co., N. Y., informs the readers of the *Agriculturist*, that after many years of observation, and having examined numerous horses affected with the habit of hanging their tongues out, he has invariably found, that such horses carried their tongues over the bit. He has therefore contrived a "reverse-curved bit,"—one with a large C bend in it. While this is used, the tongue must be kept below the bit. The inquiry of "M. B. P.," last month, page 5, is thus answered.

Cattle Breeders' Convention.—The 6th Annual Meeting of the *Cattle Breeders' Association*, referred to last month, page 17, takes place at Worcester, Mass., on the first Wednesday in March next.

Ticks on Sheep and Lambs.—The time to rid a flock of ticks is about two or three weeks after shearing—at which period the ticks all leave the old sheep and go upon the longer-fleeced lambs. Then dip the lambs in strong tobacco-water, using tobacco stems from the segar makers. At this time of year use mercurial ointment (unguentum) mixed thoroughly with four or five times its weight of lard. Open the fleece and rub the unguentum upon the skin, in lines down the back, around the neck, and around the belly. This ought not to be done in cold raw weather.

Wool Growers in Nebraska.—At a meeting of wool-growers at Omaha City, N. T., a committee was appointed to draft a bill to be reported to the Legislature for the benefit and protection of those engaged in the business in Douglass and other counties. Another committee was appointed to prepare and publish an address on wool-growing in Nebraska.

Plaster near Salt Water.—The general experience seems to be, that in the vicinity of salt water, plaster (sulphate of lime, or gypsum) is not particularly valuable applied by itself. It is useful in the stable and in manure making. We shall be happy to receive reports of experiments with plaster on grain, hoed, or forage crops (grass), within 5 miles of the ocean.

Good Barley.—Robt. Powers of Ozaukee Co., Wis., reports the crop of a neighbor of his at 80 bushels per acre. Two bushels of seed were sown; land a black sandy loam, well plowed in fall; seed harrowed in, in spring. He estimates 15 bushels lost by the grain lodging badly, and thinks sowing 4 bushels per acre, as reported by Mr. Watkins, page 302, Dec. *Agriculturist*, is altogether too much. Land differs very much in this respect, strong soil requires fewer seeds.

Dwarf Broom Corn.—Mary A. Withington, Medina Co., O., writes that the brush of this variety makes superior brooms, and that it brings a high price in the market. We have had numerous applications for seed, but do not know where it can be obtained. Those who have it for sale should advertise it.

Keeping Bees in Houses.—J. J. Pruden, Morris Co., N. J., writes to the *American Agriculturist* that he has kept bees for 25 years, and experimented to ascertain the best method for placing the hives.—He found it a good plan in winter to cover each hive with an outside box, the front of the box being left open to the sun. This obviates the necessity of moving the hives to and from winter quarters in a shed or bee house. He thinks now of housing his bees summer and winter. He has kept two hives in his dwelling during two years past, and found them more prosperous than colonies of equal or

superior strength out of doors. Mr. Quinby says in regard to the proposed change, that one or two, or even half a dozen such experiments will not justify the expense of putting up a large building for bees. The loss of queens by mistaking their hives when returning from meeting the drones, would more than counterbalance profits, unless raising queens artificially were resorted to, which few bee-keepers are competent to manage. The plan can not be recommended until at least five years, successful experience has demonstrated its value.

Hungarian Grass and Millet are not the same thing, though botanically of the same species, (*Setaria Italica*). One bears about the same relation to the other, that the little dwarf pop-corn does to the great horse-tooth corn of the West.

Rye Grass.—Charles Juzi, Mason County, Ill. The seed of this grass may be had of the dealers in this city. It may be well to experiment with it, but we fear that it would not stand the drouth any better than timothy. We would also try a mixture of clover and orchard grass.

Cotton in Missouri.—G. C. Spence, sends a sample of good cotton from south-eastern Missouri. In the absence of factories it is worked up by hand in families, who find that the product of half an acre is as much as they can take care of.

Colonization of the South.—A highly important movement has recently been set on foot in New-York City, having for its object the settlement of unoccupied or sparsely inhabited tracts in the Southern States. The plan has been organized under the direction of Mr. Eli Thayer, whose large experience in similar undertakings gives promise of success. It is designed to encourage and assist, but not direct emigration. Persons proposing to locate in the region referred to, may obtain at the central office here, by letter or personally, valuable information concerning the most inviting districts, and they may then emigrate singly or may join colonies to be formed, and share in the advantages of association. Mr. Thayer's headquarters are 229 Broadway.

Vineland Lands.—In the *Agriculturist* for last May, we published an account of a hurried visit to Vineland. Some have complained that our observations were too brief to admit of the formation of a correct estimate of the real value of the land. We made a plain statement of the time spent there, and the grounds for the opinion expressed. To avoid all appearance of any unwarrantable prejudice against the Vineland Enterprise, we admit upon page 63, as an advertisement, the account of Mr. Robinson, who has twice visited the locality, and whose opportunities of judging have, of course, been greater than our own. If possible, we shall, during the coming summer, take occasion to further examine not only Vineland, but other tracts of land in New-Jersey, which have long lain unoccupied, but are now being brought prominently before the public.

A Good Yield from an Acre.—P. Cooper, Lancaster Co., Pa., divided an acre of ground into 48 rows; gave no extra manuring; and kept the soil well worked and free from weeds. Here are his returns: 17 rows Sorghum, 60 gallons Molasses, 80c.....\$48 00
1 row Pickles, Beans, and Melons..... 6 00
5 rows Cabbage, 650 heads..... 30 00
13 rows Sweet Potatoes, 50 bushels..... 40 00
5 rows Early Boiling Corn..... 6 00
7 rows Early Mercer Potatoes..... 10 00
Turnips, 30 bushels on margin..... 7 50
Total.....\$147 50

The Agricultural College of Pennsylvania.—The fifth annual catalogue of the officers and students of this Institution has been issued. It contains a lithograph of the college building, just completed. The building is 334 feet long, extends back 80 feet on the wings, 130 feet in the central portion of the building, and is six stories high. Notwithstanding the invasion of the State by the rebel army, and other causes of disturbance, the success of the college during the last year has been very satisfactory. During the year 142 students and resident graduates have been in attendance. The Institution is managed by 12 Professors, Assistants and Superintendents, acting under a board of Trustees elected tri-annually by Delegates sent from the County Ag'l Societies of the State. The catalogue gives the grades of all the students in their studies, and in their work upon the college farm, garden and nursery. The course of study extends through four years, and a fifth year is added for resident graduates who wish to devote themselves to scientific investigations. A Primary department has also been established for students not sufficiently advanced to enter the college course. The regular course for studies embraces thorough instructions in all the natural sciences, especially those relating to agriculture. The Pennsyl-

vania Legislature at its last session bestowed the proceeds of the Congressional Land Grant upon the college. The session for 1864 will open on the 24th of February, and continue 10 months. Persons wishing further particulars should address the President, Dr. Pugh, Agricultural College, Centre Co., Pa.

Agricultural College Bills.—A bill has been introduced into the U. S. Senate, by Mr. Hendricks, of Indiana, "To extend the time in which States may accept lands granted by the United States for Agricultural Colleges." The Indiana Legislature does not meet until January 1865, and the object of the bill is to enable that State to secure her portion, 390,000 acres.

A Good School.—Though unsolicited, we take pleasure in calling attention to the announcement of the Fort Edward Institute, given in the advertising columns. The character of the school, and its advantages are there set forth, in part. The alphabet seated J, and K, side by side through our college course, and we know Dr. King "like a book." What he has charge of, will not be poorly done. Those who have sons and daughters to send away to school, will do well to apply for the Fort Edward Catalogue.

Trees from Nurseries.—S. A. Matthews, Champaign Co., Ohio. We should not hesitate to take trees from a nursery situated further north than the place where they are to be planted, always provided that the trees have been well cultivated, and have good roots.

When can Trees be Cut down and not Sprout?—Some trees will sprout if cut down at any time. Usually they are less likely to sprout if cut during the growing season, than at any other time. The most fatal time is just after the leaves are well developed.

Injury to Trees by Ice.—The trees around Boston, Mass., were completely encased in ice on the 17th of Dec. last, and so great was the weight of the accumulations, that a great number of trees, especially elms, were entirely ruined. In some cases every limb was torn from the tree. A limb with the ice on was found to weigh fifteen pounds. After thawing off the ice the weight was less than two pounds.

White Maple Seed.—Thomas Bell, Jr. Davies Co., Ill.—In December Basket this was inadvertently included among the seeds to be preserved in sand. It is one of the most difficult to keep; is ripe in May, and should be gathered and planted in moist soil at once.

Stump Machines.—W. H. Deane, C. W. We know of no stump machine worked by steam. Have sent your letter to agent of horse-power machines. We have seen sulphuric acid tried for destroying the stumps without any appreciable effect.

Farm Wagon Philosophy—Query.—Which is easier for the team, a spring wagon or one without springs, load and other things being equal? Another Query.—Which are easier, iron axles or wooden ones, other things being equal?

Strawberry—Note to Inquirers.—The variety now called the "Agriculturist Strawberry" is hermaphrodite or perfect, requiring no other variety to fertilize it.

Planting Strawberries.—Benj. F. Morrison. Three feet apart is too great a distance for the rows unless it is intended to work between them with a horse-hoe. A more economical use of the land would be to put the rows 18 inches apart, with alleys 3 feet wide between every four rows, and cultivate with the hoe. Hill culture is best whether the ground is weedy or not.

Grape Queries.—Dr. A. Szendery, Huron Co., O., and others. Six feet apart in the row will do for Delawares, with rows as far apart as the trellises will be high. Brackett's seedling is regarded as a promising variety and worthy of trial. The Iona will succeed wherever the Catawba will. The Alvey is a small black grape, said to make good wine, but for the table it is not to be compared with the Delaware and many others. "J. W. J.," Low Point, Ill. All varieties of grapes will not succeed where wild grapes grow. The Delaware, Clinton, Concord, and Hartford Prolific are the hardiest of the approved varieties. Samuel Godshall, Trumbull Co., O. Rooted layers may be removed in spring or fall, as most convenient. Coal ashes will answer to render heavy soils less compact. Their value as a fertilizer depends mainly upon the ashes from the wood or charcoal used in kindling. "G. W.," Bloomingdale, N. J., sends us his plan for training a vine around the trunk of a tree. While some graceful climbers may grow there with good

effect, a systematically trimmed grape vine would look stiff and out of taste. Besides, we cannot see how the roots of both vine and tree are to occupy the same soil, and maintain a healthy growth.

Wizard of the North.—Mrs. L. M. Chapman, of Allen Co., O. This strawberry is valued by some and discarded by others. It is said that there are spurious plants in the market, and that these have injured the reputation of the fruit. Some good judges think it valuable.

The Purple Fringe Tree.—R. D. McKee, Taylor Co., Iowa. This, the *Rhus Cotinus*, is more generally called the Smoke Tree in this country, while in Europe it is known as the Venetian Sumach, and the Periwig Tree. It is readily propagated by layers; a branch when pegged down and covered with a few inches of earth, soon strikes root. If there are no branches low enough for the purpose, the plant must be cut back to induce them to start near the root.

Whitewashing Fruit Trees.—"C. S." Laporte, Ind. We do not approve of whitewashing trees at any season. Soft soap, thin enough to apply readily, is far better to remove moss, scale, etc. Put it on early in spring during a damp time. The crooked limb probably cannot be straightened by slitting the bark.

A New Implement.—W. B. Waldo, Dutchess Co., N. Y. suggests a new implement, to be made in the form of a common iron scoop shovel slitted. He says it should be made of the best steel, the lines $\frac{1}{2}$ inch apart, beveled on the under side. It would be useful to clear ground of small stones, to collect pebbles for walks or other purposes, to separate cobs from corn after threshing, or for any similar purpose. There is an instrument somewhat after this fashion on sale but not made of steel, being merely an iron scoop with openings cut through. Mr. Waldo's plan would be an improvement.

Hawthorn Hedges.—G. W. Thompson, writes that he has had ten years' experience with these, and though at the latitude of 40° 50' they stand extremes of temperature, he considers them a nuisance on account of their harboring slugs which pass from the thorn to pears, cherries and roses, and commit their depredations.

Shucking Black Walnuts.—Boys will be glad to learn G. F. P.'s method of doing this. He bores a $\frac{1}{4}$ inch hole in a bench, placing a basket under it; then the nuts are put over the hole with the left hand and driven through it with a wooden mallet held in the right. In this way the husk is removed very rapidly, and without staining the hands.

Lucerne.—"J. M." Lynnfield Centre, Mass. This is a valuable forage plant where it will succeed. Accurate experiments are wanting to determine whether it will endure the winters of New England. It needs a good, mellow, and very deep soil, as its roots penetrate to a great depth, and stand the drouth well. It may be sown in the same way as clover, using a third more seed. In England it is cultivated in drills 12 or 15 inches apart, using 10 to 16 lbs. of seed to the acre. After the first year the crop may be cut several times during the season.

Growing Lentils.—C. A. Dietrich, Washington Co., Pa. These are usually sown in drills, and are said to do best in a light sandy soil.

Crows Among the Sweet Corn.—O. Longworth, Wright Co., Minn., having lost part of his seed sweet corn by the crows, preserved what was left by wrapping the ears with pieces of newspaper which he tied on with thread. It should not be tied too tightly if the corn is young. The experiment having been successful on two occasions, he desires it to be tried by others.

Quails and the Chinch Bug.—The Randolph Co., (Ill.) Agricultural Society at a recent meeting resolved to unite with other County Societies in memorializing the next Legislature to pass a law for the better protection of quails, because of their valuable services in destroying the chinch bug, the greatest insect pest at the West.

Large Turnips.—Some very large turnips were raised on Long Island last autumn, one on our table a few weeks since, fair and round, weighed 10½ lbs. Howard A. Collins (gardener), of Brooklyn, reports one weighing 12 pounds.

Transplanting Boxes.—"J. T." Greenfield, Mass., wishes to know of some contrivance with a movable bottom in which tomatoes can be grown to large plants, and then set in the ground without disturbing the roots, and the box removed by taking away the

bottom and slipping the box up over the plant. He proposes to use tin cans for this purpose. Plants would doubtless grow in these if there was provision for drainage. We have seen a contrivance for this purpose, but do not know whether it was patented or not—a square wooden box with the sides inclining toward the top, and a movable bottom. We can not see any advantage it has over a common flower pot, from which a plant can be slipped without its feeling the disturbance.

Sweet Alyssum, etc.—Mrs. S. F. S., Fairfield, O. *Gilia tricolor*, Purple Candytuft, *Whitavia grandiflora*, and the Long-tubed *Centranthus* are all about the same in height and duration as the Alyssum, and will make a good contrast with it.

Cultivation of Saffron.—F. F. Fenn, Summit Co., Ohio. This is more properly called Safflower. It grows best in light dry soils. The seed is sown in drills which are two feet apart, and the plants thinned to six inches. The seed can be had at the large seed stores. We can give no accounts of the profits of the crop. The great bulk of that used by dyers is imported.

The Laurestinus.—Mrs. M. T. Clarke, (no address.) This does not require any especial care. A good loam, with a little well rotted manure, and plenty of pot room are required. Water freely and give the leaves an occasional washing. When set out of doors in summer it should be in a partial shade.

The Currant Borer.—"C. S." Laporte, Ind., sends a specimen of this grub which destroys the pith of the stem, and either kills the bush or renders it very sickly. The borer is the larva of a moth called *Egeria tipuliformis*. The perfect insect is about $\frac{1}{4}$ of an inch across when the wings are expanded; the wings are of a blue black color, transparent, fringed with black, the front pair with a broad band which is more or less tinged with copper color. The moth appears in June, and lays its eggs near the buds, the young grub soon eating its way to the interior of the stem. From their position, the grubs can not be reached by any application. The only remedy we can suggest is, to cut off the affected twigs and burn them, and to try trapping the moths at the time they lay their eggs.

Cockroaches.—O. B. Jr., says may be effectually destroyed by blowing camomile flowers dried and powdered, into their crevices, by means of a common bellows having a hopper of tin so attached to the nozzle that the powder will be carried along by the blast.

Heating a Conservatory.—"Constant Reader," has a conservatory heated only by the warm air from the sitting room, and wishes to know how to increase the temperature in cold weather. A "water back" might be put in the sitting room grate with pipes leading into the plant room, but this would involve considerable expense. There are numerous gas stoves and also heating arrangements where kerosene is used. Either of these would answer, provided there were means for carrying off the products of combustion, which might be effected by a small pipe running through a piece of tin inserted in place of a pane of glass. Heating arrangements of this kind where the gases produced by combustion remain in the room, will soon injure the plants.

A Temperature Alarm.—Mr. R. A. Boyle, of Detroit, Mich., has shown us an ingenious contrivance for alarming the person in charge of a propagating house when the temperature reaches above or below the desired point. By the expansion of mercury in a thermometer bulb, a wire index is made to rise and fall along a graduated scale. Two moveable metallic slides may be set at the proper points upon the scale. When the temperature is so high or so low as to bring the index in contact with either slide, an electric current from a small battery sets an alarm bell in motion, and calls the attention of the gardener, or wakes him if asleep.

Mr. Lane's Purchasing Agency.—A few words will serve as an answer to a large number of letters of inquiry. Ever since the *Agriculturist* started in 1842, its readers, scattered as they are all over the country, have been accustomed to apply to the editors for information, and for purchase of various implements, trees, plants, stock, etc., at this central point. (It was from an attempt to gratify these numerous requests, we believe, that first sprang the now immense agricultural warehouse and manufactory of the Allens.) Two or three years ago these calls upon our time became so great that we could not personally attend to them, and did not wish to, as we prefer to do no business outside of the paper, to the end that we may be independent of all pecuniary interests, and thus be and feel impartial in our editorial labors. Knowing that Prof. Lane contemplated retiring from his col-

lege professorship, to which he had devoted twenty years, that he was efficient as a business officer of the college, and that he had in earlier life been engaged both in farming and commercial pursuits, we suggested his opening a purchasing agency. He did so, and since then we have handed directly to him all letters pertaining to matters outside of our own business. His business is entirely independent of this office, and we seldom know any thing concerning his operations, except to answer some query, or to hand him letters of inquiry. As noted in his advertisement, he attends to the supplying of any thing and every thing desired to be purchased, and we believe intends to do it well.

Where can I get it?—We might fill a large portion of the "basket" with replies of where this or that thing can be procured. This information would generally be of use to but one person, and it would not be pleasant reading to others. Bear in mind that general dealers usually have everything in their line that is in the market. If seeds, trees, plants or implements are wanted, send to some of those who advertise in our columns, for their catalogues, or order direct. Reliable purchasing agencies are advertised in the *Agriculturist*, which may be employed with advantage by those at a distance.

Dominique Fowls.—"How shall I know the pure Dominiques? I have been presented with some. They are grey, tall, and rather leggy; also, how many hens do you consider sufficient for one cock? E. S., Staten Island."—Fowls of this breed are of compact form, very active, have a very long and strong flight. They have a sort of Dorking style, with long legs, and slaty grey (hawk colored) plumage, each feather being cross-barred more or less with slaty blue, giving a uniform speckled look to both cocks and hens; legs usually flesh-colored; tail full feathered; 20 hens to one cock is enough.

A Spider by Mail, from Kincksville, Ky., was so crushed and dried that we could not identify it.

Berkshire Pigs are called for so frequently, that reliable breeders should advertise stock on hand.

Sweet Potato Plants.—A. T., Woodward, Rutland Co., Vt. The sprouts are best obtained from those who make it a business of starting them, and advertise them at the proper season.

Hydraulic Lime.—B. H. Martin, Del. This differs from the ordinary lime in containing a variable proportion of magnesia, alumina (clay,) and is usually colored with oxide of iron. It is valuable for its property of hardening under water.

Gunny Bags.—B. H. Martin, Del. These are coarse bags made from jute, the fibre of a species of *Corchorus*, which grows in India. Both the bags and the cloth are imported. They serve for packing dye woods, saltpetre, and various coarse articles. The imports of bags and cloth into the United States in 1858, amounted to about a million and a half dollars.

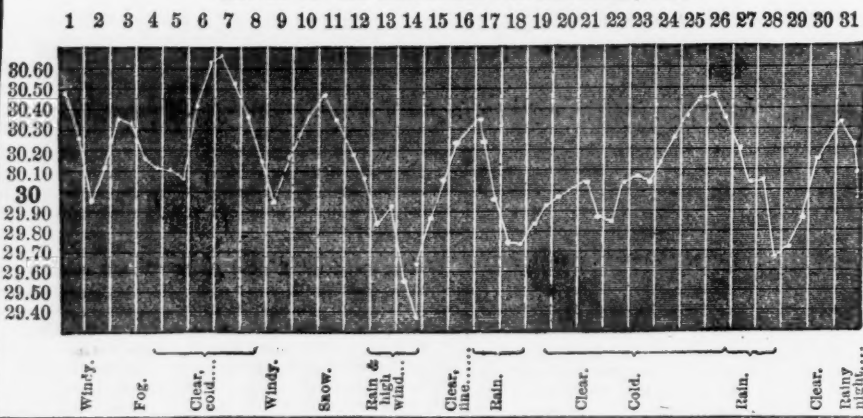
Leaky Roofs.—M. A. Genung, Licking Co., O., advises to mix two parts of coarse sand with one of paint skins, in making the mixture for stopping leaks in roofs as described in January *Agriculturist*, page 5.

Keeping Cider Sweet.—James Dilts, Muskingum Co., O., gives the following directions: Heat cider until it boils, then pour into a jug or other suitable glass or earthen vessel, which should previously be heated to prevent cracking. Cork tight and seal immediately with cement, the same as in putting up fruits. It will keep unchanged for years.

500 Universal Clothes Wringers have been presented by the Proprietors (347 Broadway, New-York,) to the U. S. Sanitary Commission, to be sold at the Great Fairs of New-York and Brooklyn, held for the benefit of this most useful Society. The Commission is receiving many valuable presents, but few of more practically useful articles than these. They are of the \$7 size, and will sell so readily that this gift is almost equivalent to \$3,500 in money.

What isn't Coffee.—A correspondent, "W. C. M.," agrees with the opinion heretofore expressed in the *American Agriculturist*, that no beverage except that made from grapes, should be called wine, and desires that a similar rule be applied to coffee. He says peas, beans, chicory, dandelion roots, etc., burned and artfully mixed, may make good medicine, but they do not yield coffee. He should have proposed a name for the substitutes. How would the term "Mockoffee" answer?

RECORD OF THE BAROMETER FOR DECEMBER, 1863.



EXPLANATIONS.—The perpendicular spaces represent the days of the month; the horizontal spaces indicate tenths of an inch as figured on the left. The height of the mercury at 7 in the morning and 9 in the evening of each day is shown by the dots in the zigzag line. The general state of the weather is given underneath. It will be seen that both rain and high wind (usually a N. E. wind here) are foreshown by a rise of the mercury, which falls during the stormy weather. Several attentive correspondents send us their observations, which we regret not to have room for.

New York Live Stock Trade for 1863.

Below we present some carefully prepared and interesting figures, made up from the weekly records kept in the office of the *Agriculturist* by our own experienced reporter, who has for many years visited the live-stock yards during the sales-days of each week. (These tables we have already furnished to some other journals and they are being widely published, but we place them here in permanent form for examination and future reference.)

RECEIPTS OF LIVE ANIMALS FOR 1863.

Week ending.	Beef Cattle.	Net Price.	Milch Cows.	Veal Calves.	Sheep & Lbs.	Live Hogs.
Jan. 6.	8,542	7 1/2	76	336	4,797	39,997
Jan. 13.	4,638	8 1/2	110	291	7,526	40,185
Jan. 20.	4,127	8 1/2	72	315	6,149	35,424
Jan. 27.	4,027	8 1/2	133	351	6,880	22,827
Feb. 3.	4,540	8 1/2	104	348	5,305	31,040
Feb. 10.	5,969	8 1/2	120	326	5,134	22,271
Feb. 17.	5,275	8 1/2	123	366	8,534	21,066
Feb. 24.	4,029	8 1/2	127	167	6,091	24,692
March 3.	5,223	8 1/2	154	469	5,780	19,884
March 10.	5,729	8 1/2	164	451	5,465	18,591
March 17.	4,546	9 1/2	137	428	6,449	17,400
March 24.	4,084	10	177	431	6,872	16,356
March 31.	4,583	10 1/2	211	785	4,382	11,986
April 7.	4,511	10 1/2	891	1,250	6,502	17,276
April 14.	4,502	10 1/2	213	623	4,938	12,915
April 21.	4,245	10 1/2	126	623	4,459	11,400
April 28.	4,908	10 1/2	122	634	2,412	14,925
May 5.	3,837	10 1/2	112	813	5,362	8,802
May 12.	4,309	11	106	832	6,214	11,633
May 19.	3,906	11 1/2	117	671	5,283	9,006
May 26.	4,686	11	105	1,179	3,479	9,270
June 2.	4,503	10 1/2	153	1,254	8,103	11,570
June 9.	4,686	10 1/2	190	1,254	7,638	10,505
June 16.	4,570	10 1/2	100	682	7,967	11,121
June 23.	4,537	10 1/2	140	1,168	9,503	11,437
June 30.	4,559	10 1/2	153	1,158	11,401	17,967
July 7.	4,504	9 1/2	126	1,465	11,218	10,460
July 14.	3,888	10	88	948	9,888	6,500
July 21.	5,213	10 1/2	92	409	11,231	7,224
July 28.	5,331	9 1/2	119	609	11,347	11,300
Aug. 4.	4,855	8 1/2	107	1,005	11,783	9,750
Aug. 11.	3,903	8 1/2	132	737	9,053	7,175
Aug. 18.	4,302	8 1/2	113	580	13,489	11,510
Aug. 25.	4,657	9 1/2	144	718	14,947	8,490
Sept. 1.	5,820	9 1/2	113	628	12,854	6,543
Sept. 8.	5,194	9 1/2	119	643	18,083	9,830
Sept. 15.	7,007	9 1/2	106	908	17,075	13,160
Sept. 22.	4,705	9 1/2	81	719	12,882	18,862
Sept. 29.	7,051	9	105	694	18,132	20,244
Oct. 6.	6,581	8	162	885	14,048	21,229
Oct. 13.	5,547	8 1/2	102	637	16,221	22,465
Oct. 20.	7,291	7 1/2	111	814	15,523	31,339
Oct. 27.	4,976	8 1/2	100	947	17,952	26,427
Nov. 3.	6,065	8 1/2	116	1,079	16,751	53,258
Nov. 10.	6,295	8 1/2	155	880	15,595	56,508
Nov. 17.	6,496	8 1/2	142	769	18,118	36,622
Nov. 24.	5,179	8 1/2	144	650	10,618	35,908
Dec. 1.	5,323	9	179	548	13,986	42,560
Dec. 8.	5,592	9 1/2	129	545	18,413	50,976
Dec. 15.	5,727	9 1/2	124	411	12,890	44,858
Dec. 22.	5,910	9 1/2	97	429	8,792	37,744
Dec. 29.	5,922	9 1/2	40	161	7,586	15,703
Totals.....	263,229	9 1/2	6,715	38,296	522,911	1,096,773
Weekly av.....	5,062		129	698	10,944	21,092

Totals.....	235,060		5,253	30,258	475,722	1,008,712
Weekly average	4,532	7 1/2	101	582	9,149	21,129
Totals.....	235,028		5,316	33,383	57,823	538,509
Weekly average	4,265	7 1/2	110	630	9,950	11,292
Totals.....	226,747		5,154	40,162	514,191	819,628
Weekly average	4,360	8 1/2	138	772	9,888	16,147
Total number of animals in 1863.....						1,924,898
Weekly average of all kinds in 1863.....						37,017
Total receipts of animals of all kinds in 1862.....						1,945,605
Weekly average of all kinds.....						35,493
Total receipts of animals of all kinds in 1861.....						1,387,326
Weekly average of all kinds.....						26,176
Total receipts of animals of all kinds in 1860.....						1,107,882
Weekly average of all kinds.....						21,305

These tables include all the animals sold at the regular live-stock markets. There are many irregular sales, from boats and barges, and from farmers direct to butchers, which about make up the number taken hence to supply

neighboring cities, so that the above figures show just about the consumption by this city and its immediate suburbs of Brooklyn and Jersey City. The prices given for beef are the weekly average wholesale prices of all the animals sold in that week, good, bad and indifferent. This price is what the dressed four quarters are estimated to cost the butchers per pound, allowing the skin and offal to go for the expense of killing and dressing. The weekly supply of different animals, the total supply for each of four years, with other items, will be worth study.

NEW YORK CITY MEAT BILL FOR 1863.—Our weekly note book makes the average weight of all the beef cattle brought here, a trifle over 700 lbs. net. At 700 lbs. we have 181,260,300 pounds of beef. At 9 1/2 cents this is \$66 1/2 per head. Veal Calves averaged \$7 1/2; Sheep and Lambs \$4 1/2; live hogs \$9 1/2. We have, therefore: 263,229 Beef Cattle, at \$66 1/2 each.....\$17,504,728.50 86,298 Veal Calves, at \$7 1/2 each.....263,060.50 522,311 Sheep and Lambs, at \$4 1/2 each.....2,219,821.75 1,096,773 Live Hogs, at \$9 1/2 each.....10,693,586.75 or \$30,681,147 for beef, mutton and pork during 1863.

WHO FURNISHES OUR BEEF.—Of the 209,941 beef cattle sold at the great 44th street yards, we have obtained and recorded the origin so far as could be ascertained each week, as follows:

From.	No. of Cattle.	From.	No. of Cattle.
Illinois.....	119,181	Canada.....	730
New York.....	28,921	Connecticut.....	513
Ohio.....	19,477	New Jersey.....	194
Indiana.....	18,837	West Virginia.....	82
Michigan.....	8,850	Massachusetts.....	49
Kentucky.....	6,709	Kansas.....	46
Missouri.....	1,504	Nebraska.....	30
Pennsylvania.....	763	Total.....	209,941

It will thus be seen that more than half of our beef is credited direct to the great grain and corn producing State of Illinois, while many of those coming last from States further east were originally from Illinois. What could we do without the railroads to bring them here?

Current New-York Wholesale Prices.

There are no specially noteworthy features in the agricultural markets. The two columns of prices below, indicate the state of the supply and demand. The rise in gold just now, carries up the prices of exportable breadstuffs, and there is also a little better foreign demand. Oats are much called for by the government and are well up. Wool is not in large supply and is firmly held at full prices. Hay and Hops are in good request at firm rates. Hog products are active in request and advancing.

CURRENT WHOLESALE PRICES.			
		December 18.	January 16.
FLOUR—Super to Extra State	\$6 10 @ 6 00	\$6 50 @ 7 25	
Super to Extra Southern	7 00 @ 11 00	7 05 @ 11 00	
Extra Western	7 00 @ 11 00	7 00 @ 11 50	
Extra Genesee	6 90 @ 9 25	7 30 @ 9 25	
Superfine Western	6 10 @ 6 30	6 60 @ 6 70	
RYE FLOUR	5 70 @ 6 15	5 30 @ 6 20	
CORN MEAL	1 00 @ 1 00	1 00 @ 1 00	
WHEAT—All kinds of White	1 00 @ 1 00	1 00 @ 1 00	
All kinds of Red	1 00 @ 1 00	1 00 @ 1 00	
CORN—Yellow	1 00 @ 1 00	1 00 @ 1 00	
Mixed	1 00 @ 1 00	1 00 @ 1 00	
OATS—Western	1 00 @ 1 00	1 00 @ 1 00	
State	1 00 @ 1 00	1 00 @ 1 00	
RYE	1 00 @ 1 00	1 00 @ 1 00	
BARLEY	1 00 @ 1 00	1 00 @ 1 00	
COTTON—Middings, per lb.	20 @ 20	20 @ 20	
Hops, crop of 1863, per lb.	20 @ 20	20 @ 20	
FEATHERS, Live Geese, p. lb.	62 1/2 @ 65	63 @ 65	
SEED—Clover, per lb.	11 @ 11 1/2	12 1/2 @ 13 1/2	
Timothy, per bushel	2 50 @ 2 85	2 50 @ 3 00	
FLAX, per bushel	3 15 @ 3 25	3 10 @ 3 30	
SUGAR—Brown, per lb.	11 1/2 @ 14 1/2	11 1/2 @ 14 1/2	
MOLASSES—New-Orleans, p. gal.	55 @ 70	60 @ 70	

COFFEE, Rio, per lb.	83 @ 85	82 1/2 @ 83 1/2
TOBACCO—Kentucky, &c. p. lb.	10 @ 30	14 @ 30
Seed Leaf, per lb.	15 @ 55	15 @ 55
Wool—Domestic fleece, p. lb.	70 @ 85	72 @ 85
Domestic, pulled, per lb.	65 @ 80	62 1/2 @ 78
Wool, California, unwashed	25 @ 57 1/2	25 @ 55
TALLOW, per lb.	11 1/2 @ 12 1/2	11 1/2 @ 12 1/2
OIL CAKE, per tun.	47 00 @ 52 50	46 50 @ 52 50
PORK—Mess, per bbl.	18 25 @ 18 50	19 25 @ 23 50
Prime, per bbl.	12 50 @ 13 00	12 50 @ 16 50
BEEF—Plain mess	12 00 @ 13 25	12 50 @ 14 50
LARD, in bbls, per lb.	11 1/2 @ 12 1/2	12 @ 13
BUTTER—Western, per lb.	20 @ 26	20 @ 26
State, per lb.	26 @ 32	27 @ 33
CHEESE.....	12 @ 16	13 @ 16
NEANS—per bushel	2 50 @ 3 00	2 50 @ 2 90
Broom Corn—per b.	8 @ 10	8 @ 10
Eggs—Fresh, per dozen	22 @ 27	31 @ 32
Eggs—Lined, per doz.	20 @ 21	24 @ 26
POULTRY—Fowls, per lb.	8 @ 11	8 @ 11
Ducks, per lb.	8 @ 12	8 @ 14
Geese, per lb.	7 @ 10	6 @ 9
POTATOES, per lb.	8 @ 12	8 @ 12
POTATOES—Mercers, p. bbl.	2 25 @ 2 25	2 25 @ 2 25
Buckeyes per bbl.	1 50 @ 1 62	1 62 @ 1 75
Peach Blow, per bbl.	1 87 @ 2 00	2 00 @ 2 25
Nova Scotia, per bushel	50 @ 55	50 @ 60
TURNIPS—Ruta baga, per bbl	1 13 @ 1 25	1 25 @ 1 50
APPLES, choice, per bbl.	4 50 @ 5 00	5 00 @ 5 00
CABBAGES, per 100	6 00 @ 10 00	8 00 @ 11 00
DRIED APPLES, per lb.	5 @ 9	9 @ 10
DRIED PEACHES, per lb.	24 @ 26	24 @ 25
DRIED RASPBERRIES, per lb.	24 @ 25	23 @ 24
APPLES, mixed lots, per bbl.	3 50 @ 4 00	3 50 @ 4 00
APPLES, mixed lots, per bbl.	2 50 @ 3 00	2 50 @ 3 00
CRANBERRIES, per bbl	8 00 @ 10 00	8 00 @ 8 25
PIGEONS, Wild, per doz.	50 @ 1 25	90 @ 1 25
PRAIRIE CHICKENS, per pair.		30 @ 55

Review of the Breadstuff Markets.

Below are Ten very condensed and convenient tables, the first two referring to the transactions in the New York markets during a month ending January 16, to which date they are made up. These tables have been carefully prepared, specially for the *American Agriculturist*, from official and other reliable sources, including the notes of our own reporter. They will be found highly interesting, as showing the course of trade and giving a general view of the condition of our breadstuff supplies. They will also be valuable for reference in after years.

TRANSACTIONS AT THE NEW-YORK MARKETS.			
RECEIPTS.	Flour.	Wheat.	Corn.
24 days this m'th	232,000	11,500	96,000
24 days last m'th	573,000	3,150,000	260,000
SALES.	Flour.	Wheat.	Corn.
24 days this month	297,500	2,573,000	1,467,000
24 days last month	375,000	2,715,000	1,466,000
Comparison with same time last year.	Flour.	Wheat.	Corn.
RECEIPTS.	Flour.	Wheat.	Corn.
24 days 1864.....	232,000	11,500	96,000
24 days 1863.....	573,000	3,150,000	260,000
SALES.	Flour.	Wheat.	Corn.
24 days 1864.....	297,500	2,573,000	1,467,000
24 days 1863.....	375,000	2,715,000	1,466,000
3. Receipts in New-York during each of five years past.	Flour.	Wheat.	Corn.
1863.....	232,000	11,500	96,000
1862.....	573,000	3,150,000	260,000
1861.....	573,000	3,150,000	260,000
1860.....	573,000	3,150,000	260,000
1859.....	573,000	3,150,000	260,000
4. Exports from New-York during each of five years past.	Flour.	Wheat.	Corn.
1863.....	232,000	11,500	96,000
1862.....	573,000	3,150,000	260,000
1861.....	573,000	3,150,000	260,000
1860.....	573,000	3,150,000	260,000
1859.....	573,000	3,150,000	260,000
5. Stock of Flour in New-York City, January 1.	1861.	1862.	1863.
Western Canal Flour, bbls.....	500,000	447,000	721,353
Canadian Flour, bbls.....	10,000	11,000	15,000
Southern Flour, bbls.....	91,968	96,956	28,500
Total.....	601,968	454,956	744,853
6. Stock of Grain in New-York, January 1.	1860.	1861.	1862.
Wheat, bushels.....	1,915,388	3,535,741	2,046,052
Corn, bushels.....	79,400	2,712,000	5,573,911
Rye, bushels.....	30,500	26,400	55,500
Barley, bushels.....	98,700	169,574	485,172
Oats, bushels.....	1,576,100	494,790	774,575
7. Receipts of Breadstuffs at Chicago the past four years.	1860.	1861.	1862.
Flour, bbls.....	1,353,518	1,479,231	1,753,288
Wheat, bushels.....	14,427,063	17,395,002	13,157,533
Corn, bushels.....	15,262,394	26,369,989	31,145,721
Oats, bushels.....	2,198,389	2,067,018	3,782,422
Barley, bushels.....	617,619	457,599	800,476
Rye, bushels.....	518,978	490,989	576,732
Total grain.....	32,824,961	46,780,587	49,342,904
8. Breadstuffs at Chicago at the close of each of four years.	1860.	1861.	1862.
Flour, bbls.....	31,745	26,956	50,750
Wheat, bushels.....	871,337	1,185,902	935,961

Notes on Various Kinds of Hogs.

Prominent among those animals to which, as agriculturists, we must accord a very high economical importance, is the Hog. He holds an honored place in every civilized community so soon as he is dead, though while living, he is stigmatized as the very type of uncleanness, and surrounded with disgusting associations. The Mohammedan and Jew are polluted by his touch, so that a leg of bacon is a more formidable weapon against an Israelite, than a "sprig of shittalah." Nevertheless, there are pig-worshippers among the South Sea Islanders, and certainly pork has its devotees in this country—as witness the thousands of pork packers and dealers in our great Western cities, who "by this craft have their wealth." Scientifically, the hog belongs to the species *scrofa*, of the genus *Sus*, of the sub-order *Suidæ*, (which names are much like those of our Welch friend, Mr. Evan Evans Ap-Evans, for they all mean nearly the same thing.) The animals of the Hog kind, are of the natural order *Pachydermata* (thick-lidded), in which we also find the elephant, rhinoceros, hippopotamus, tapir, and peccary; between these and the hog there are marked points of resemblance—in their heavy build, sluggish motions, short necks, peculiar snouts, and wallowing habits. The same order includes the horse, ass, and zebra; between these and those just mentioned, the resemblance is not so close, but all farmers must have noticed a similarity in the structure of the teeth and their arrangement in the jaws. It is an interesting fact also, that there exists a breed of solid-hoofed hogs.



Fig. 1—THE WILD BOAR.

The hog is generally regarded as one of the most stupid animals, but really he is entitled to a place among the most intelligent. The muscular power alone of the wild boar would not render him so formidable an adversary, were it not used with surprising discrimination. The sow in defense of her young, is a terrible fighter, and a most cunning strategist, as every one familiar with the half-wild swine of our Southern States very well knows. The statement that this animal has a scent as acute as that of a setter or pointer dog, will hardly be credited. Yet it is a matter of history that, with very little labor, an English sportsman actually trained a young sow to point game, and used her in hunting for years thereafter, sometimes alone, and sometimes in company with dogs. Swine are found among almost all nations and tribes of men in the old world, in temperate and torrid

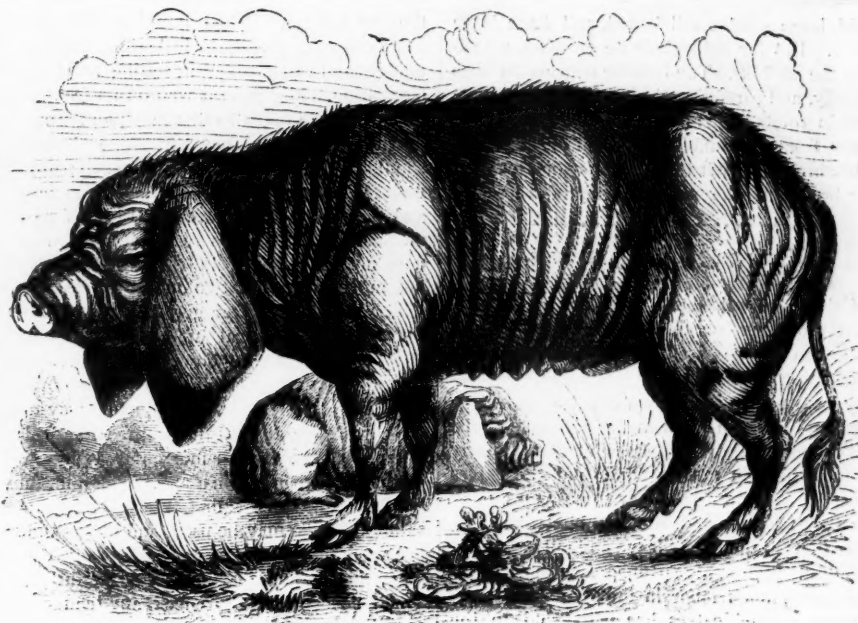


Fig. 2—JAPANESE SWINE.—Sketched and engraved for the American Agriculturist.

latitudes, and have been used as food since the earliest historic times. Like other domestic animals which are thus widely disseminated, this species (*Sus scrofa*) exhibits many distinct varieties, and numerous more or less peculiar breeds—the result of the modifying influences to which they have been subjected in the course of ages. The wild boar of which we present a spirited engraving, is doubtless the progenitor of all the breeds of European swine, modified somewhat by importations of Asiatic (particularly Chinese) blood; and from these the various breeds in North, Central, and South America are derived. The wild boar still exists in certain parts of Europe and Asia, and his flesh is not uncommon in the markets of the cities of Central Europe, during the autumn. The aim of breeders, and the effects of domestication, perhaps, have been to reduce the size of the head, neck, shoulders, and bony parts, generally, and to increase the size of the hams, the breadth of the loin, to decrease the size and weight

of the bones and all the less profitable parts, and to change to a great extent the appearance and general character of the animal. This is strikingly shown in the figure of the Chester County (Pa.) white hog, herewith presented.

It would be very interesting, and instructive too, could we learn with what aim the hog has been bred in Japan. The engraving given above is a portrait of one of a pair of Japanese swine now in this city. They seem remarkable only for the immense development of skin and souse. Their hides lie in massive folds, like the skin of the rhinoceros; and their pendulous ears are fairly elephantine. Their faces are crowded with coarse irregular wrinkles, giving them great breadth, and a very peculiar expression. They are said to feed freely, but never to fatten sufficiently to take out the reefs in their hides. They are of a dingy drab color,

sparsely covered with black bristles, and have long straight tails. With these peculiarities, the breed has, in our judgment, no good point.

The engraving of the Chester County hog is introduced in comparison, because it shows so well the results of breeding with a constant view to flesh, fat, and smallness of offal. We are often asked the question, "Do you consider the Chester County Whites a fixed breed?"—or "the best breed?"—or, "Is there any better breed?" Hogs of similar shape to the Chester County Whites, are common throughout a considerable region, including parts of New-Jersey, Pennsylvania, Maryland, and Delaware. What their origin is, no one knows exactly. They are of all colors, but yellow or tan-color with some black, is very common. It is said, however, that many years ago, an "imported Bedfordshire boar" was crossed with the common sows of Chester County, Pa., and thus originated the variety, which has since been bred with great care to improve its good points, and breed out all traces of black and yellow in the animals. There is no such recognized breed as the Bedfordshire, and many of the animals sold as Chester Co. Whites, breed black and yellow-spotted pigs. It is probable, therefore, that the demand

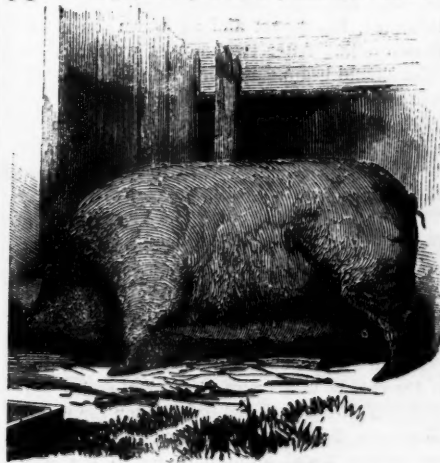


Fig. 3—CHESTER COUNTY HOG.

for Chester Co. Whites has been so great, that fraud has been practised in some cases. Where genuine animals can be obtained, the cross upon inferior swine is very beneficial, as they are

solid, large sized, small boned, and have large hams. But for indiscriminate crossing, we advise the Suffolks. The breeder who makes hogs a study, and carefully selects males to improve certain points in his herd, will, of course, select boars from the Suffolks, Berkshires, Essex, or other breeds, to suit the end for which his hogs are bred, and the market his produce seeks.

Hints on Raising Calves.

Calves are raised for veal, or to become milk producers, or to bear the yoke, or still unbroken to be used as beef. Where the production of veal is most profitable, it is usually best to give each good cow two calves to feed, and let them run with her and have all the milk they will draw. In winter and early spring, this can not be done, and the calves must be brought to the cow three times a day for the first week or fortnight, and twice a day after that; if the calves leave any milk, the cow should be thoroughly stripped each time. This plan saves much labor in milking, and so soon as one pair of calves has been sold to the butcher, another pair may take their places. Cows will usually own any calves given to them after one or two milking times, and they may then be left to run together in the pasture. The calves should be nearly of an age. No cow that will not give plenty of milk for two calves, ought to be kept for any thing but beef; and it is an excellent plan to make the short-teated cows nurses in this way. The calves which are to be raised either for beef or breeding, should have all the milk after they are 6 or 8 weeks old.

Where butter is made, and the milk can not be spared to the calf, the plan of a correspondent of the *Agriculturist* may be followed. He writes: "Shortly after the calf is dropped, take it from the cow and put it in a dry, well littered stable. Part of each day, it should be allowed the range of some adjoining yard, for exercise. By separating cow and calf thus early, the former is sooner weaned from her offspring, and the latter learns to drink milk more easily than if allowed to suck for several days. Milk the cow at once, and feed the calf all it will drink. To teach it to drink, give it your fore-finger with the back of the hand immersed in the pail of milk; a few trials will suffice. During the third week, give about one quarter of skimmed milk; in the fourth week, one half, and after the sixth week, let it be all skimmed, but sweet and as warm as newly drawn milk. After two months, weaning from milk should begin. Feed a little Indian meal wet up in milk or water. Give once a day, a little soft, sweet hay; he will soon learn to nibble it. A pint of oats per day may early be given. Soon he will learn to eat grass, and then in good pasture, will take care of himself." The practice of removing the calf from the dam we do not commend, though it is very generally practised. After the labors and trial of maternity the cow ought to have the satisfaction of suckling her offspring, at least so long as it is necessary for the calf to have nothing but pure milk. The cow will often worry and pine if the calf be taken away too soon, and a tendency to garget or cake bag is often the result. Moreover, if the calf be fastened in a calf-pen or elsewhere, and allowed to go to the cow three times a day, entire separation will be much more easily borne after a few days. Where the milk is sold, and it is best to wean the calf from the cow as speedily as possible, it may be removed after a few hours. Meanwhile

the cow will have licked it and nosed it to her heart's content, giving the little thing a notion of matters and things about it, setting its blood in circulation, and getting it well on its feet. The calf will have taken its first meal, and "butted down the bag," as they say. The first milk should never be withheld from the calf; utterly unfit for human food, it is aperient in its action, and cleans out the bowels of the calf as no medicine can. Serious results follow, if this does not take place; in case the bowels do not move, a dose of two ounces of castor oil, with a teaspoonful of ginger, ought to be administered. The removal of the dark, gummy feces with which the bowels of a newly born calf are more or less filled, is very important. After the calf is removed, it is kept away from the cow except at meal times, three times a day. After about the third or fourth day, it may well be taught to drink from a pail. The milk must be freshly drawn at first, the next day, part skimmed milk may be used, and by the time it is a week old, it may be fed on skimmed milk altogether. Then begin to add a little thin gruel, being careful to check any tendency to scouring, by scalding part of the milk with a little fine flour. Bran added to the gruel is loosening; fine wheat flour and boiled milk have the opposite tendency. So that with careful watching, a calf may be easily set right without physic. Where calves run with the cow, and can nibble grass a little, they seldom have any ailments. After a calf is three weeks old, and often earlier, the milk may be withheld altogether, and a tea made of clover hay used to mix with the gruel. In this way a calf may be fattened for the butcher or raised successfully, but it will usually be more economical to feed milk, unless it is worth more than 2 cents per quart.

Cost of Fattening Beef.

The present high price of corn at the West, owing to extensive injury from frost last season, must seriously interfere with the fattening of beef and pork in those regions. An Illinois farmer presents in the Chicago Times the following statement of how it works. He says that any ordinary cow or steer, will eat up in value double or treble the present price paid for the very best beef in the market, before it can be made fat. For instance, it will take about 80 bushels of good corn, beside at least a ton of good hay, to fatten a lean steer weighing 1000 lbs., to weigh 1400 lbs. The account may be stated thus:

One lean steer of 1000 lbs is worth at 2½¢.....	\$25.00
80 bushels of corn are now worth at 90¢.....	72.00
1 ton of hay now worth.....	10.00
Labor and trouble of feeding four months.....	3.00
Interest for 4 months on the above \$110.....	3.66
Total.....	\$113.66

Therefore, to pay actual cost and expenses, the steer, when fat, must be sold for \$113.66. After having put his steer through the above process, he should weigh about 1,400 lbs. for which the highest market price is \$4.50 per 100 lbs, live weight, realizing for the steer, when fat, just \$63.00, which deducted from the \$113.66, the value of the steer, before feeding, provender, etc., leaves instead of any profit the round sum of \$50.66 actual loss in one steer.

Hence, the correspondent concludes that the farmer who sells his corn and hay, and his cattle unfattened at \$2.50 per hundred pounds, makes the most money. He adds: "There are certain indices which I think it would be well for both farmer and cattle dealer to observe; they may be stated thus: To make one pound of beef or pork requires six pounds of good corn, fed in

the most economical manner. When corn is worth 10 cents per bushel, six pounds are worth one cent; consequently you can make corn and beef at one cent per pound when corn is worth but 10 cents. When corn is worth 20 cents, six pounds of corn are worth two cents, and your beef will cost you two cents per pound, and consequently, when corn is worth \$1 per bushel, you can not make a pound of beef or pork for less than 10 cents. And, at these figures, there is left no profit to the farmer for all his labor."

Important Fact in Breeding.

At a recent session of the Massachusetts Board of Agriculture, Prof. Agassiz gave an account of several experiments made to ascertain the influence exerted by the sire upon the future progeny of the dam. He coupled a water-dog with a Newfoundland slut. Part of the resulting litter showed the external marks of the sire, another portion more resembled the dam, and the remainder partook of both breeds. A second litter was bred from the same slut by a greyhound, and the pups were almost precisely like the first litter, part Newfoundland, part water-dog, with scarcely a trace of the greyhound. Similar results were obtained with rabbits of different varieties. This appears to indicate that the first fecundation of the female is not confined in all its results to the immediate progeny, but extends to the further issue. The idea is not new, but additional proof from such a high quarter is valuable. Every one can readily see its application in breeding farm stock. Great disappointment has often been felt by parties who have paid largely for the services of well-bred sires, because the resulting issue has shown little likeness to the male parent, and the latter has been condemned as a poor stock-getter. It is possible that in such cases the results were caused by the female having previously borne young by an animal essentially differing from the sire subsequently employed, and thus having been rendered incapable of producing true offspring to any very dissimilar animal. If so, it is an additional reason for securing the use of well-bred animals, especially for the first progeny of any female. The expansion and conformation of the productive organs may perhaps be permanently affected by the character of the first progeny.

Profit of Flax Culture.

The Annual Report of the Worcester (Mass.) Agricultural Society for 1863 contains the following statement of the expense and product of 136 square rods (a little over ¼ of an acre) of flax, grown by Aaron Kimball:

Dr.	Cr.
Plowing.....	\$ 2.00
Harrowing.....	2.00
13 Loads Manure.....	13.00
130 lbs of Guano.....	4.55
1 Bushel Seed.....	3.75
Sowing.....	1.00
Pulling Flax.....	11.25
Taking off Seed.....	4.00
Cleaning Seed.....	1.00
Dressing Flax.....	12.03
	Total Product.....\$148.50
	Deduct Expense... \$54.58
	Profit.....\$93.92

The land cultivated was a kind of sandy gravel, dry and easily worked. It had been in pasture 40 or 50 years, and was not in very productive condition. It was plowed up the previous fall, and harrowed in the spring. Further details of culture are not given. The value of the unspent manure after removing the flax, was reckoned to more than pay the interest on cost of land, and this item was therefore omitted in the account.



Maple Sugar Making.

The sap of the Sugar or Rock Maple when it first flows in the spring, is to appearance nearly as clear and liquid as pure water, and in reality it contains scarcely anything but cane sugar. The sugar is more easily obtained in a marketable state than from the juices of any other plant yielding sugar for commerce. If the sap be pure and clear as it flows from the tree, it is only necessary to boil it down in clean vessels, taking care not to burn it, and when sufficiently concentrated, to preserve it as molasses, or after boiling more, to pour it into moulds. It is so easily and cheaply produced that sugar makers have been very careless about it, using utensils of the rudest character. The amount of uncrystallizable sugar or molasses necessarily produced is very small, but as the molasses is quite as much valued as sugar in most markets, this has led to some neglect of the sap, and deteriorated the character of both sugar and molasses.

Let the first fact stated above, be fixed in the mind, viz., that pure sap yields nearly pure sugar, and that the coloring, the quality, and much of the labor of sugar making, result from foreign substances that get into the sap while in the troughs, etc. Remember further, that in the absence of these foreign materials the amount of crystallized sugar obtained will be much greater. We see then, the importance of securing the greatest possible cleanliness, in every thing connected with collecting and manufacturing the sap. Exposure to the air produces fermentation, and diminishes the crystallized sugar rapidly; therefore, covered vessels, and boiling as fast as the sap flows, are important. Fermentation of the sap also injures the peculiar "maple flavor" which is so greatly relished. The quality of the sap, that is the amount of sugar to the barrel of sap, varies considerably from year to year, but we know of no accurate experiments touching it, nor to determine the character of other substances present in the sap.

The wooden sap troughs and potash kettles are still in use in some parts of the country, but enterprising sugar makers use wooden buckets which are preferable to tin, and flat evaporating pans, and the sugar is much improved. The sap is sometimes conducted to the sugar house in "leaders" or small wooden troughs, which would be improved by scalding them out once a day to prevent souring. In like manner the buckets ought to be scalded occasionally. The trees are tapped with half-inch augurs, and the hole enlarged with a sixteenth of an inch larger bit, before the close of the flowing season. The sap spouts are 6 or 8 inches in length, 1 inch square, or turned round having a 4 inch

hole bored through them. The ends are tapered off, and they are driven into the holes of the trees so as to barely hold. If tubs are used to collect the sap, there should be holes of about 10 inches square cut to pour in the sap, and over them linen towels should be laid, to strain out sticks, leaves, etc., if the arrangements of the buckets, etc., are not so perfect as to exclude all filth, as is desirable. After this, the sap must be kept covered. The storing tubs should stand on higher ground than the boiling pan,

so that the sap will flow from one to the other. During the boiling, skim as often as scum rises. It is seldom that much skimming is necessary. When the cooled syrup is nearly as thick as good molasses, draw it off into a tub to settle, straining through a flannel strainer. Here any sediment will be deposited. After the syrup has settled clear, draw it off, and boil it down again until it is thick enough to sugar off. When the sugar is to be "caked" or "stirred," it must be boiled until a spoonful of it put upon snow will be perfectly brittle when cold. The liquid sugar is taken from the fire and when granulation has commenced, and the mass is thickened considerably, fill the moulds rapidly. If it is to be stirred, at the same time commence stirring, the kettle being held firmly, and stir the mass till it has the appearance of dry brown sugar of the shops. When the sugar is to be drained it is usually taken from the fire before it would cool brittle, and after standing until it granulates quite thoroughly, it is ladled out into tubs with false bottoms, some 5 inches above the true, 3 or 4 holes being in the false bottom, and covered by saucers or plugged by round smooth sticks. The sugar is ladled into the tubs, and when settled the plugs are loosened and partly withdrawn, so that the molasses will run through. This may be drawn off from the bottom of the tubs.

A Productive Farm.

A. C. Fulton, residing near Davenport, Iowa, writes to the *Prairie Farmer*, that his gross receipts from 62 acres of land last year amounted to \$10,111. The net profit was \$7,905 after deducting \$3 per acre for interest or rent of land—besides cost of seed, labor, and all other expenses. This gives the extraordinary sum of a little over \$127 per acre. The farm is on first quality of rolling prairie land broken up in July 1862, at a cost of \$2,50 per acre. A large portion of it was replowed before seeding. Twenty acres were put in wheat and corn, the balance in onions, potatoes, and sorghum. The larger portion was taken for onions, the seed being put in with a hand drill. It is hardly necessary to add that the land was thoroughly worked. There were also excellent facilities for marketing. Portions of the crops were sold at Davenport, and the balance sent by rail-road to Chicago. With all these advantages, the story looks large—not because of its impossibility, but from the fact that not many farmers manage to bring out the full capabilities of their land. We do not quote this as an example that may be generally imitated, but it shows that occasionally fortunes are made in soil culture,

as well as in other pursuits, probably oftener, while the chances of failure of securing a competency are greatly in favor of farming pursuits.

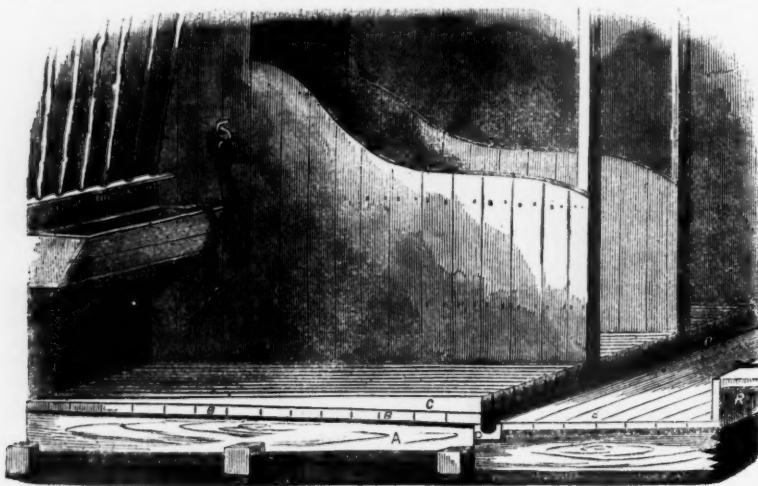
Is Rarey's Horse-Breaking a Failure?

Some of the English journals are endeavoring to show that Rarey's plan of breaking and taming horses, has resulted in greater injury than benefit, and that the system is an entire failure. Instances are given in which colts have been rendered almost worthless from splints, curb, etc., caused by application of the strap, and handling according to Rarey's instructions. Without doubt, such injuries could be brought on by the manipulations of ignorant or careless grooms, who had learned just enough of the "system" to know how to throw a horse and hold him. Mr. Rarey never professed to impart common sense to his pupils, and it shows a lack of this article on their part, when they conclude from his teachings that every colt must be put through a course of knee-straps to prepare him for the harness or saddle. If properly trained from birth, scarcely one colt in a hundred will need any such persuasive to proper behavior. Where vicious habits have been contracted, Rarey's plan, or some modification of it, can be successfully employed—not by every tyro, but by a careful horseman—with less fear of injury to the animal than by any mode previously brought to public notice. We refer to this subject, however, not so much to defend Mr. Rarey, who needs no advocate, as to enforce the truth that the vices of a horse are mostly learned in colthood, and that proper treatment during the first three years of his life will make him gentle, docile, courageous, and accomplished in all he needs to learn to make him useful.

How to Dress Skins with the Fur on.

There are many ways of preparing furs for use as articles of dress or ornament. A way the writer used successfully with small pelts, as those of muskrats, mink, cats, rabbits, foxes, etc., is as follows: After stretching and drying, scrape off all the bits of flesh and lumps of fat which may adhere, then wet thoroughly on the flesh side with a strong solution of salt and alum; fold one half upon the other with the fur out, and roll up or pack the skins away for a week or ten days. After this, the pelts are shaken out, each is spread with a layer of bran or sawdust, and thus they are piled one upon another, or again rolled up to lie for a day or two. The moisture is absorbed, and after this, repeated vigorous rubbings and workings by the hands finish them. Thick skins need to be treated a second time with alum and salt, which is best applied finely pulverized and rubbed in.

Tallow or other grease rubbed upon the undressed skins, softens and preserves them. On this principle the Indians tan skins of buffalo, bears and smaller animals—for the nicer operations, using brains which are on this account very highly valued. The fur-dressers in the cities use rancid butter, smearing the skins with it, then put them into tubs, and tread and work them with the feet very thoroughly; after this sawdust is thrown in among the skins and they are repeatedly worked over in contact with it, to remove all excess of grease. Subsequent manipulation, rubbing the skin side with chalk or potter's clay, and whipping and brushing the fur, finishes them. All these operations depend for their success upon the thorough rubbing and working which the pelt must always receive.



Improvement in Horse Stables.

Level floors are a great desideratum, and as intimated in a letter from a correspondent of the *Agriculturist* in Washington Territory, (last volume, p. 325,) it is not only unnatural, but cruel and injurious to animals to force them to stand with the fore feet higher than the hind



Fig. 2—METHOD OF SAWING SPARS.

feet, especially upon wet and slippery places. The item alluded to has elicited from a gentleman of Rhode Island, information concerning a style of stable floors more or less in vogue in and near Providence, and which is to be commended in the main. This consists primarily of a tight floor, sloping to the rear, falling 4 inches in 10 feet, the length of the stall. Upon this lie spars measuring 4x5 inches at the rear end, and

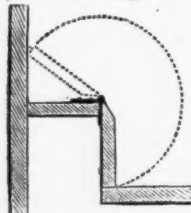


Fig. 3—MANURE DROP.

tapering to 4x1 inches at the head of the stall. These spars are placed three quarters of an inch apart, and form a level surface for the horse to stand upon. This is shown in the engraving of the stable: (we follow the sketch of our friend in representing the floor-boards (B) as running cross-wise the stall, but with our present views, in building or altering our stables, we would contrive to have them run with the slope.) Fig. 2 shows how a 4x6 piece may be sawed to make two spars, each 4x5 at one end, and 4x1 at the other. The sloping floor conducts to the rear the urine flowing down between the spars, which is discharged into a gutter which is made in a 3x6, or 4x8 inch piece, exactly as eaves-troughs are made, being cut shallow at one end and deep at the other. At the lowest point, where two gutter-pieces meet, a 2-inch auger-hole is bored to let the liquid through into the cellar beneath, where it is caught in a vat or tank, or is conveyed off upon the manure heap.

Behind the stall proper is the passage-way, 6 feet in width, (assuming 16 feet to be the least width of a good stable,) and out of this, close to



Fig. 4—CLEANER.

less he happens to slip or fall down, and even then, that no damage can possibly result. It is also evident that, instead of packing a mass of dung upon the edge, as the common trap-door or lifting floor-board does, this lid will clean the edge every time it drops. The opening is 9 inches high, and the lid is hung on strong hinges.

Fig. 4 represents a contrivance for clearing the spaces between the spars, and for cleaning out the gutter. It is a rounded hoe-blade which fits the 4-inch groove. On the back of the hoe is a spur of iron $\frac{1}{4}$ inch wide, to clean between the spars. The handle projects beyond, and is used to poke straws and dirt through the hole in the gutter.

Potatoes versus Tobacco—an Experiment.

Mr. Daniel Steck of Lycoming Co., Penn., sends us the statistics of an experiment made this season, which are of sufficient interest to present to our readers. He says: "Last Spring I read an article in the *Agriculturist* which stated that 'other crops probably, might be quite as profitable as tobacco, if for their production the same amount of labor and expense were employed.' Now, this rather damped my ardor, for, along with many of my neighbors, I had the 'tobacco fever.' However, I commenced the preparation of a piece of land for a trial of this valuable crop, but all the while the labor was progressing, that 'other crops, etc.' kept sounding in my ears, so that I at last concluded to try a part of my tobacco patch with some 'other crops,' and fixed upon the potato for experiment, with the following results:

TOBACCO PATCH.		Dr.
To plowing 1 acre.....	\$2 00	
" 24 loads of manure.....	18 00	
" Cross-plowing.....	2 00	
" Marking and preparing.....	2 00	
" 4,200 plants.....	10 50	
" Setting plants.....	2 50	
" Hoeing.....	10 00	
" Topping and manuring.....	5 00	
" Hauling and hanging.....	5 00	
" Stripping.....	4 00	
" Packing Boxes.....	5 00	
" Hauling to market.....	2 00—\$68 00	
By 964 lbs. Tobacco, at 18 cents per lb.....		\$177 12
Profit on one acre of Tobacco.....		\$109 12
POTATO PATCH.		Dr.
To plowing half an acre.....	\$1 00	
" 12 loads of manure.....	9 00	
" Harrowing.....	33	
" 12 bushel seed.....	9 00	
" Marking and planting.....	2 00	
" Cultivating and hoeing.....	2 50	
" Digging.....	5 00	
" Hauling to market.....	10 00—\$38 83	
By 130 bushels potatoes, at \$1.....		\$130 00
Profit on $\frac{1}{2}$ acre of potatoes.....		\$91 17
Equal to, for one acre.....		\$182 34
Deduct profit on 1 acre of tobacco.....		109 12
Balance in favor of potatoes.....		\$73 22

Mr. Steck used small-sized tubers for seed,

cut them in two and planted them six or eight inches apart in the rows, covering them by driving a double corn plow astride of the furrow."

He remarks that, though a dollar a bushel may seem a high price for the potatoes, it was what they readily brought in the market at Williamsport. But at 75 cents per bushel there would be \$8.22 in favor of the potatoes. If we admit this tobacco crop to be an average one, the experiment would indicate that potatoes are more profitable at the East, where they command so high a price; for any soil fit for tobacco can be depended upon to average 260 bushels of potatoes, with the culture and manure here described. The case is different at the West, and wherever potatoes can not be readily taken to market, owing to their bulk and weight, as compared with tobacco. All such matters must be taken into account in making comparisons. It is an undoubted fact, that high culture applied to other crops will very frequently, if not most frequently, show marked results in their favor, when their profits are compared with that of tobacco.

Improved Pin for Ox-Bows.

A correspondent of the *American Agriculturist*, J. Eager, sends the accompanying sketch and description of a convenient bow-pin. It resembles the wire spring by which an umbrella is held open, only, of course, being made of larger wire. Two of these are fastened on the top of one side of the bow, by means of a narrow iron band, as shown in the engraving. An opening in the bow receives



OX-BOW PIN.

the ends of the springs when they are pressed together by being pushed up through the yoke. The bow is easily withdrawn, by pressing the springs together with one hand, and pulling it down with the other. A small iron plate inserted or screwed on the yoke where the springs rest, prevents wearing the wood.

The Profit of Keeping Poor Cows.

There must be some great profit in keeping poor milkers, or else the majority of farmers do not know where their profit lies. Shrewd men do not maintain cows that give little and poor milk, in preference to those that give much and rich milk, unless they see advantage in it. Many such animals are raised and grow old upon the farms. If there be no profit, then these farmers are not men of sense, but we know they are sensible men, so there must be, as we conclude, some decided profit in this way of stocking a dairy farm. We shall be much obliged if some one will show to the *Agriculturist* exactly wherein this profit lies. In all our observation we never knew a farmer who set out to stock his farm with first-rate milk-stock, that did not succeed. With proper care in selecting, every herd of cows in the country may average, on good feed, 500 gallons of milk each per annum. Isolated cases of cows that give 1,000 gallons are not very rare.

In a letter recently received from Mr. A. Niles, of Hampshire Co., Mass., he says: "I became convinced, years ago, that it was poor economy for a farmer to keep poor cows." This may seem strange to some farmers, but Mr. Niles asserts it without naming the reasons which influenced him, and proceeds to give the

results of putting his convictions in practice, as follows: "I have been trying for a length of time to practise according to my theory, by disposing of all ordinary cows, and supplying their places with others, and I am now quite satisfied with my course. From 4 cows I have made and sold since April 1, 700 lbs. of butter, at 20 cents per lb., and raised in part upon the milk of the same cows, 4 fine heifer calves, from good stock on both sides. I call the calves worth at least \$10 each, and the milk we gave to the hogs worth at least as much as the keeping of the calves besides the milk. One of the cows is now about calving, and I hope to make from her, before the 1st of April next, 100 lbs. more of butter, making in all 800 lbs. during the year, from 4 cows—being 200 lbs. from each cow. Calling the calves, as above, \$10 each, \$40; Butter, 800 lbs., 20 cents per lb., \$160; total, \$200, or \$50 each. Their keeping in summer was common pasture; in the month of April, hay, with one feed of mangel wurzels. Other farmers may do better with better feed."

Note on the Cultivation of Onions.

Mr. L. T. Keith, of Tompkins Co., sends an account of his management of this crop. His onion patch is near his hog pen, and receives an abundant supply of manure from that source. He manures and plows in the fall, and in the spring gives a thorough harrowing. After raking off the bed it is covered with straw, which is burned over. The seed is sown in rows 18 inches apart, and the bed then receives a dressing of four quarts of ashes, and an equal quantity of hen manure, to every two rods of ground. This application is repeated four times before the onions begin to bottom to any extent. He reports his crop for the last year at three bushels of good onions to every rod of ground.

Water-Gaps—Water-Gates.

The inquiry through the columns of the *Agriculturist* for a good plan for a water-gap has received several responses. When fordable

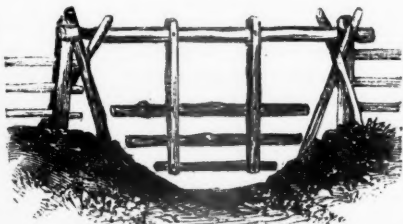


Fig. 1—DEFECTIVE WATER-GATE.

streams cross highways, or through fenced pasture grounds, any contrivance which will let the water pass in time of freshets, without washing away, and yet form a good fence when the stream is fordable, is called a "water-gap," or "water-gate." This may be arranged to float upon the rising tide, or being stationary, let the water through or over it. The floating gates must be so constructed as neither to be broken by ice nor to entangle brush or floating logs and trees; fixed ones can only be used where much ice and flood-wood do not occur. The first form which we give (fig. 1) is very simple, but faulty inasmuch as ice and snags would be very likely to catch in it. Very similar to this, is one without these defects, a sketch and description of which were forwarded by Adam Haun, of Washington Co., Illinois. It

consists (see fig. 2) of two uprights, crotched at the top, very firmly set in the ground, and braced against the direction of the flow of the

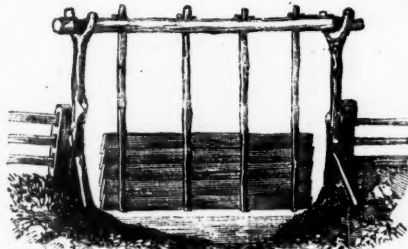


Fig. 2—IMPROVED WATER-GAP.

water. Between these, and lying in the crotch, is a pole, larger or smaller according to the width of the stream. Near each end a short section is worked down to a smaller diameter, so that the pole can not slip in the crotches. Into this pole studs are mortised, which extend as low as necessary. Boards are nailed upon these studs, upon the up-stream side, and lapped so as not to catch the "drift," whatever it may be. When high water comes, this hanging gate will float upon the stream, the pole turning in the crotches, which must of course be somewhat higher than the floods can ever reach.

D. M. Hays, Fayette Co., Ohio, sends the description of one (see fig. 3) which he calls a

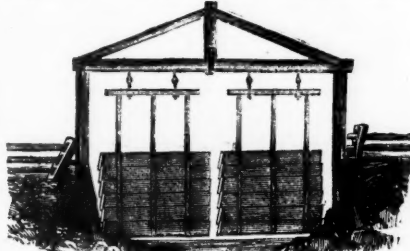


Fig. 3—DOUBLE WATER-GATE.

"flood-gate." He says: "My plan is the best I can get after long experience. If built of sound timber it will stand 15 years, as I have already tested." It is all of hewn timber; the posts 8 by 8 inches, and of length sufficient to rise above the floods, are set and braced in mud-sills (12 by 20 inches) not shown in the cut. The cross-beam, or plate, is mortised upon the posts, strengthened to prevent sagging, by a king-post (which is attached by a stirrup), and braces. The two gates are suspended independently, from the cross-beam, and are constructed on the same principle as the one in the second plan described, with respect to lap of boards, etc.

Fig. 4 illustrates the plan used by C. G. Siewers, of Ohio. It is immovable, and is adapted to a brook or "dry branch" liable to flood, after heavy rains. It consists of a log laid upon stones at a proper height above the bed of the brook, and against two strong posts. Upon this rails are laid, their ends bedded in the ground

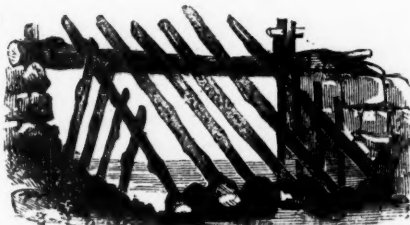


Fig. 4—FENCE FOR WATER GAP.

and fastened with stones. Stakes are driven on the sides to prevent pigs getting through. This is recommended as useful in filling up ravines,

for much drift is caught which would otherwise be washed down to a lower point, and the bed of the stream is thus gradually raised.

The plan submitted by Mr. P. A. Bettens, Switzerland Co., Ind., is similar to this in object and principle, and consists of a timber (see fig. 5) built into two stone piers. Rails are set in the bottom of the stream and mortised firmly into or fastened against this cross-timber.

No one kind of water-gap can be recommended as adapted to general use, but each of these kinds, and perhaps others, may be best under different circumstances. The hanging gates, unless they are quite heavy, may be swung by hogs so that they can get through, if the bed of the stream becomes nearly dry. This may be prevented by a stake driven on the up-

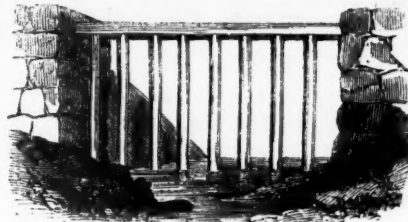


Fig. 5—PERMANENT WATER FENCE.

stream side, to prevent the gate swinging in that direction, and a row of stakes to prevent the approach of the hogs on the same side.

The Use of Sea-Weed.

"Connecticut," writes to the *American Agriculturist*: "It is principally through the use of the marine vegetation thrown upon our shores, that we can bring back to the land the riches it is ever pouring into the sea. From the banks of every rill, brook, and river, there is constant waste by attrition; and from every village and city upon tide-water, the fat of the land is cast out through the gutters and sewers. It goes to manure the gardens of the sea, and to nourish a vegetation hardly less luxuriant and bountiful than that which grows upon the land. These weeds, as they are commonly called, are torn up by the fall and winter storms, and are thrown in great masses upon the shore. In high tides and with favorable winds they are sometimes piled so high that they remain permanently. But by far the larger part are swept out to sea by the tides, and permanently lost to the land.—To the shore farmer, these weeds are a source of wealth not likely to be over-valued. They are greatly under-estimated at present, though much has been said of their value in agricultural papers, and they are used to some extent in every district where they are accessible. Much is gathered and spread over the farms within five miles of tide-water, but far more either rots on the shore, or is swept into the sea again for the want of hands to gather it.

The principal varieties used for manure are known as rock or blister weed, kelp or ribbon weed, and eel grass. In all masses of these weeds thrown upon the shore, will be found a great variety of smaller weeds, some of them exceedingly fine, and beautifully colored. The rock weed is so called from the fact that it grows in great abundance along rocky shores. It is called blister weed, from the multitude of air bladders that form upon it. This is justly regarded as the most valuable of the sea weeds for making manure. Where its worth is known, it sells readily for two dollars a cord, delivered at the wharf or landing place where farmers come from a distance to purchase it. It is very

rich in nitrogen, and gives good results in whatever form used. The demand is so constant, that many persons living in favorable localities, make a business of gathering it, and get large wages. It is pulled from the rocks by hand.

"It is used in a variety of methods, according to the circumstances of the cultivator and the crops he desires to raise. If he has no specific crop in view, it is carted immediately into the barn-yard, where it serves the two-fold purpose of increasing the bulk of the manure-heap, and of fixing the more volatile parts of the droppings of cattle. It is particularly valuable for this latter purpose. Here it is mixed with muck or soil from the fields, and remains until it is wanted for top-dressing or for the spring crops. To employ a full supply for the barn-yard, barn-cellar, and stables, is probably the best use for all kinds of sea-weed.

"If there is a surplus, as there always should be upon a shore farm, it may be used in several other ways. Rock-weed is one of the most valuable manures for the corn crop. It is frequently drawn directly to the field that is to be planted in the spring, and is there composted with muck alone, or with a mixture of muck and yard manure. It ferments in the heap, and should be forked over a few weeks before planting time, when it is spread and plowed in.

"It is also an excellent manure for turnips, and for all the brassica tribe of plants. After the ground is plowed and the rows are marked for the turnips, the green weed is dropped in the furrow, and a ridge is raised over it by turning two furrows together. The seed is then planted upon the ridge, and in fresh land a fair crop of turnips is almost invariably grown.

"For winter grain, the rock-weed is spread broadcast upon the land, and plowed in. It is also used as a top-dressing for grass land, both pasture and mowing, and always with good results, though much less of it is used in this way than in the former methods.

"The kelp or ribbon weed is a much larger plant than the rock-weed, frequently growing several yards in length, and is attached to the rock in deep water, by a stout, round stem from a half-inch to an inch in diameter. It is treated in the same way as the rock-weed, but is more commonly spread upon the ground, to be plowed in. It decomposes very rapidly, whether in the furrow or in the compost heap.

"The eel grass is less esteemed than the other varieties, possibly because of its greater abundance, as well as on account of its less intrinsic value. The dry weed, as drawn from the shore, is used a good deal for bedding in stables and sheds, and for the covering of beds and borders in the garden. It is an excellent mulch wherever that is wanted. A good deal of it rots upon the shore, and in this fine state it is largely used for a top-dressing upon grass land. Where it can be had for the carting, as it generally can be by those who own shore farms, it will pay well to keep the teams busy in winter upon this work. We have so often seen excellent crops of grass following these top-dressings, that we have no doubt of their economy. But a better way of gathering this kind of weed is in its green state. It is a common practice with farmers who live a little back from the shore, to attend to this work immediately after haying. They have large scows holding twenty or thirty tons, and gather the weed with rakes made for the purpose. A good deal of mud is hauled up with it, and after the boat is loaded, it is floated up with the tide to the landing-place, and thrown upon the shore, or taken immediately

into carts and drawn to the yard. More than half the mass is mud, and the whole is easily cut with the shovel. This, mixed in the yard with stable manure, forms an excellent compost, and is the main reliance of many farmers for manure. As it can be had in all tide-water creeks and coves, for the gathering, it costs the farmer nothing but the labor of scowing and carting. With this compost, which he can multiply to any desirable extent, he can bring up his farm to any degree of fertility.—As all these weeds contain sulphates, it does not seem to be advisable to mix plaster in the compost heap where they are used. Indeed it is of little use to spread plaster in any shape upon shore farms.

"In regard to the use of lime in connection with sea-weed, it will depend very much upon the farmer's facility for procuring it, whether it can be made to pay. It is not needed to assist in the decomposition of the compost heap, for the green weed will do this very perfectly. Oyster-shell lime, and the refuse lime from gas works, are usually the cheapest sources of supply near the shore. Where these can be procured cheaply, it will do to use them upon the land. Stone lime at the market price in cities will not pay. Sea-weed and mud from tide-flowing creeks, made up principally from decayed sea-weed, are cheap sources of manure, and should be used to the extent of the farmer's ability to procure them."

Manure of Different Classes of Animals.

Cows in full milk or with calf, secrete from their feed, great quantities of valuable substances which fattening cows or oxen will not withdraw from what they eat—hence the manure of the milch cows is not worth nearly so much as that of fattening animals. This must be evident from the obvious fact, that out of the milk, or what would be milk, the entire structure of a 5-weeks-old calf is formed. The calf continues to grow and learns to eat the same food that the cow does, and for several years is building up his frame of heavy bones; all the valuable ingredients permanently entering into his system, of course come out of his feed, and would, were he a full-grown steer, have passed into the manure. Many farmers are likely to undervalue the important differences in the quality of the excrements of different classes of the same kind of stock.—The differences which we have alluded to, of course exist as well in the manure of other kinds of animals as in that of neat cattle. Let us then bear in mind that keeping milk-giving and growing animals is a great tax upon the land, that fattening animals make rich manure heaps, and that full-grown male animals draw much less upon the soil than females bearing young and giving milk.

How to Save Manure from the House.

E. Dickerman, Middlesex Co., Conn, writes: "The article in the January *Agriculturist* on 'Treatment of Night Soils' has induced me to send you my method of saving all liquid manures made in the family. At the lower edge of my garden, I made a pit large enough to contain 2 or 3 cart loads of muck, weeds, or other refuse matter to act as absorbents. This pit was stoned, flagged and cemented. I then dug a ditch from my slop room, and laid a cement drain deep enough to be below frost, from the back door to the pit, and connected therewith my wash-room and sink, by which all sink slops, washing suds, and liquid night soils are

conveyed to the pit. In this way any ordinary family may make and save, at a trifling expense, sufficient manure to fertilize a small garden."

Fermentation of Manures.

Manures act upon the soil in three ways. They either supply plant food directly to the soil; or indirectly furnish it by making available that which may exist in the soil; or they change the character of the soil so that barren ground becomes fertile—not by the addition of plant food, but of something which makes soil fit for the roots of plants. Most manures act in all these ways, but by far the most common action is the first mentioned, namely, supplying food directly to the growing plant. The manure from stables, cow-yards, and hog-pens, when applied to the soil in its fresh state, must undergo fermentation, and even decompose quite thoroughly before it is available as plant food. During the progress of this fermentation the plants derive some benefit in several ways, but the effects are much better, in most cases, when the manure is applied after it is well rotted, that is, when fermentation, and in fact decay, has progressed so far that the whole mass admits of being worked over to a uniform consistence.

Manure, consisting of solid and liquid excrements of domestic animals with litter, if thrown into a heap, soon heats, and this heat is sometimes intense. Spontaneous combustion even has taken place, which could be accounted for in no other way. The great heat of a common hot-bed is well known. In this condition the valuable qualities of the manure waste rapidly.

If the same manure be compactly piled up, or in any way subjected to great pressure, all fermentation ceases, provided only the usual amount of moisture be present. This may be seen wherever a cattle path crosses the manure heap, or where cattle are allowed to stand on their manure, as is sometimes practised. The conditions necessary to decay or fermentation are: (1) air, (2) moisture, (3) some warmth. Practically, there is always warmth enough when the manure is not actually frozen. There is also an abundance of air if the mass is not subjected to a great pressure. The great desideratum is, so to regulate the supply of moisture and pressure, that a uniform fermentation will proceed, and not go too far. The fermentive action produces moisture from substances which before were dry. Breaking up the fermenting mass, and again packing it, check the fermentation, and considerable time is required before it starts well again, and this is one of the best ways of making the manure rot uniformly. When the heap is built up with perpendicular sides, and so that water may be leached through it, an excellent quality of manure may be produced by having a pump rigged to throw the liquids of the stable over the entire mass, saturating all parts. The stable liquid, with the leachings of the heap, is best collected in a hoghead or tank sunk in the ground near by. The liquid thus flowing over the heap, wets all parts, is absorbed to a considerable extent, imparts renewed activity to the fermentation of the strawy parts, checks the too violent fermentation of the richer portion by washing out the more soluble matter, and at the same time it renders the whole mass more uniform in character. Almost all fermentation ceases when manure is submerged in water, or is very wet. The addition to stable manure, of inert vegetable substances in large quantities, like muck, checks fermentation somewhat, but after a while it

starts again and the increase in the bulk of the manure will also be found to be a very great addition to its value.

Where are the best Cattle?

The most valuable breeds of neat cattle originated in Great Britain—the Short-horns, Devons, and Herefords in England; Ayrshires in Scotland; and Alderneys in the Channel Islands. It would be natural to suppose that the best specimens of these breeds are still to be found in Great Britain, but we are by no means sure that this is necessarily the case. Among the great variety of soils and climates in this country, there are those peculiarly adapted to certain of these established breeds, and considering the tendency of the surrounding circumstances to change the type of animals bred for several generations under similar influences, and the constant study of our best stock-breeders to improve their herds, we may reasonably expect marked improvement in favorable localities. It is certainly true that we have as fine Devons and Ayrshires as there are any where. Alderneys too have been selected with great care, the highest prices have been paid, and many prize animals have been imported. Our Short-horn breeders have been exceedingly liberal and judicious in their purchases in England, paying the highest prices and taking off the very choice of the best herds of England in repeated cases. A few years since American bred Short-horns began to find their way back to British pastures, and now we notice that descendants of these Americans are prize-takers at British Shows. At the Royal Agricultural Society's Show in Worcester, the 1st prize for heifer calves over 6 and under 11 months old, was awarded to D. McIntosh, for Lady Oxford 5th, 11 mos. old, got by 3d Duke of Thorndale out of Lady Oxford 4th—both of which animals were bred by S. Thorne of Thorndale, Dutchess Co., N. Y.

Pleuro-Pneumonia in Cattle.

Notwithstanding the great efforts and noble sacrifices made by the citizens of Massachusetts to stay this disorder when it first appeared among them, we still hear of it in that State and elsewhere, and no doubt we shall hear more of it henceforth. It is acclimated, the seeds are sown from Maine to Minnesota, and they will bear fruit. In European countries where regular Veterinary surgeons are sustained by the government, and a police system exists which men dare not come in conflict with, this disease is controlled by most stringent measures. The infected herds are isolated, treated by educated veterinarians, and we believe the cured animals are fattened and killed. All exposed herds are thus annihilated. After this, the buildings are thoroughly purified, and only when the surgeon gives a certificate, may they be reoccupied.

In this country if a man suspects that the disease is in his herd, and knows the danger—nothing hinders him from selling out his entire stock, fumigating and liming his barns, and stocking his farm anew. Thus the disease is scattered, surely to break out in distant localities. The man who does this is guilty of inflicting upon numerous farming communities the greatest possible scourge—the most insidious and terrible malady which can befall their herds.

The need in this country of educated veterinary physicians and surgeons, is very great, and will continue so long as the quackish horse-

leeches and cow-doctors are encouraged in their quackery by reading farmers, and until young men of character devote themselves to the study of the diseases of animals, gaining a thorough education, and thus proving themselves worthy, are received into the fraternity of educated professional men. Had we such men in every county, this disease could be recognized at once, and the proper isolation effected. Public sentiment would uphold the town, county, and state officers in taking very severe measures to stop the spread of the malady even now, were men of influence to inform themselves thoroughly in regard to the necessity of prompt and energetic action. Indiscriminate immediate slaughter is not to be recommended. Isolation of the herd and inoculation with the virus from the lungs of a slaughtered animal, in the tails of all (in which the disease has not made great progress,) will enable the farmers to save most of their animals not much diseased, and fat them for beef. This subject is one which demands the attention of all our agricultural societies, and in fact, has a great personal interest for every farmer.

Wagon Wheels.

Wagon wheels ought to stand perfectly plumb, and the face of the tire should be parallel with the axles and with the plane of travel, if it is a prime object to have the load upon the wheels drawn with the least outlay of power. Carriage and wagon makers have, it would appear, long been in the habit of following in the ruts of old usage, and have not worked philosophically. In this they are like the rest of the world and especially like us farmers. In the Coach-makers Journal we find some sound reasoning about the shape and position of wheels. Carriages are made to run straight forward. Wheels are often made "conical" or "dishing," that is, having the rim a narrow section of a cone. Now a cone naturally rolls in a circle, and a cylinder rolls straight forward. The tire of a wheel therefore should be a narrow section of a cylinder, for there is a loss of power in making a cone roll in a straight line. The power which it is required to move a cone in a straight line may be judged from the fact that the most powerful means for grinding the hardest materials is a cylinder forced to roll in a circle. And the same "twist" or "drag" which grinds the paint in a paint mill worked on this principle, wears out the wheels, pulverizes the road, and adds to the draft of wheels if made conical. It is unphilosophical also to have tapering axles and conical hub-boxes, both should be perfectly cylindrical. If the ends of the axles are bent down, the only good effect is to give the mud thrown when driving rapidly a tendency to fly away from the carriage. The wheels, however, roll upon the edge of the tire, and are drawn at a mechanical disadvantage.

Eggs Four Cents a Piece.

There need be no pullets sent to market because corn being \$1.50 per bushel, it will not pay to keep them. In this city fresh eggs bring 40 to 45 cents per dozen, and the price will likely be higher before it is less if the practice of killing off the pullets lasts longer. Four cents a piece is the price when left at the door by a man whose character is a guarantee that all are as represented—fresh laid. At such prices it will pay to put up a regular hennery with

glazed southern front, a roosting and feeding room, and retired laying and hatching room. Warm water given twice a day to hens thus quartered, with plenty of grain food, some meat or fresh bones pounded fine, fed regularly as often as every other day, and some green feed also, as lettuce, celery, cabbage, etc. on the alternate days, will all conduce to persuade the hens to keep up a steady laying all winter.

Look Out for Help.

It is rather to be hoped than expected, that the scarcity of farm help experienced last year, will be alleviated this, by the early return of the stalwart yeomen who left the field of industry for the field of battle. At best, they can not participate in the spring work. It therefore behooves all employers to look out in season for needed help. When a reliable man can be secured, lose no time in engaging him. Good help is cheaper at high wages, than inexperienced or careless hands at the lowest rate, and an unimportant difference of price should not prevent a bargain with one known to be trustworthy. It may be necessary for many to employ green hands. The sooner they are found and set to work, the better. Fortunately an immense increase of immigration is partly supplying the demand for laborers. Many who are now leaving the old countries have practised the modes of farming as conducted there, and if properly trained, will soon become familiar with American ways. The employers in a township where many hands are needed, might profitably engage a suitable agent to look out for the required number from the Germans, Irish, and others now flocking into this city and other Ports of Entry. He will need to be a man of considerable address, or the substitute brokers will secure them by the ship-load, to be retailed out at a heavy profit, as has occurred heretofore. In many cases good help might be obtained through the services of those having friends across the Atlantic, to whom they would at once write upon application.

Labor-saving machinery may be now introduced upon thousands of farms with especial advantages. The mower and reaper, grain-header, horse-hoe, horse-rake, hay-spreader and horse-pitchfork, should be secured at every practicable point. Cultivators will do well to look out for these and other needed implements before the busy season comes on. Last year many were unable to procure them, through the unprecedented demand which exceeded the ability of manufacturers to supply. Our advertising columns will indicate where to send for catalogues and other information concerning the various implements.

A MAMMOTH GRASSHOPPER.—A Frenchman while translating an American book, came to a sentence which related that a soldier tied his horse to a locust (tree) standing in front of a house. Looking at the dictionary he found the word locust to be in French, "*lanternelle*," meaning "grasshopper." He therefore used the word *lanternelle* in his translation, thus conveying the idea to his readers, that in this country grasshoppers were large enough to admit of a horse being fastened to them, and that one was at the time conveniently standing by the door.

A little boy ran to his mother with, "O Ma! Johnny took the last egg out of the nest, and now the old hen ain't got any pattern to lay by."



A SHELTERLESS FLOCK. — Engraved for the American Agriculturist.

Shelter for Sheep.

Our artist this month furnishes us with a picture which, we are sorry to believe, has its counterpart in many parts of America. Taggy-fleeced ewes, big with promise, and stiff with cold, on a hazy February morning, after a light fall of snow, turn over the sticks and stalks in the dilapidated rack, or ruminate upon the prospects in lambing time, while the crows content themselves with the anticipations of the good time coming. Artistically the picture is effective in the disposition of lights and shades, the grouping of the animals is good, the atmospheric effect very natural; in fact, the chief objection to the engraving is, it is a little too natural.

The sheep is an animal which will endure much exposure, and its health is better when it is exposed to most of the natural changes of the atmosphere, but not to storms or wet ground. The Merino is probably the hardest of those breeds which are most profitably bred in this country, and will bear most exposure. There are many fine flocks, healthy and vigorous, particularly in the prairie States, which never have more shelter than is afforded by a board fence, or an Osage Orange hedge. For all this, sheds would be a great comfort both to the sheep, and to the shepherds. The straw and rail shelters first, to be succeeded by more substantial sheds, and these again by good sheep barns—this is the order of progress. A sheep barn must afford shelter both for the sheep and their feed—hay, straw, and grain. It should be supplied with flowing water or a good well. The site should be perfectly dry and sheltered from winds to avoid much drifting of snow, and it is best to have it large enough to accom-

modate the entire flock. Or, if it is impracticable to have all in one barn, then the barns should be near together, and if possible, placed so as to afford more effectual shelter. The barn should always be built on the side-hill principle, even though it be on level ground—the sheep rooms being on the lower floor, and the entire space above being used for hay and grain. Where there is no available hill, the sheep floor may be depressed a little, and a causeway raised so that teams may be driven in upon the main floor. For large flocks a convenient arrangement is a main building with low wings, which indeed are only closed sheds. The number of sheep which may be accommodated in a certain space, varies with each different breed. Randall says, "an apartment 20 feet by 40, will accommodate 75 Paular Merinos," so that they can all eat at the same time at wall racks. The larger families of Merinos need more space, and the South-Downs and Long-Wools still more (near twice as much as the first named). It is better to have too much space than too little, at any rate. The same writer limits the number of sheep which should be confined in one room (40 by 40) to 150; many good farmers say 100. Double feeding racks may be so arranged as to form partitions, to subdivide the 100 or 150, but they will not be a sufficient separation for the chief divisions of a large flock. The rooms and yards should be entirely distinct; and it is very desirable also to have a detached shed wherein to place any part of the flock which may be diseased, or which may have been exposed to disease. In all buildings for sheep, the floors above them should be perfectly tight (tongued and grooved) to prevent the sifting through of hay-seed and dirt, and all hay-racks used should be so con-

structed that dust will not get into the wool. Sufficient litter should also be used, to prevent injury to both sheep and fleece, by the manure.

What is Inside of a Plant.

Most persons are familiar with the external parts of a plant; they know that the root takes up food from the soil, that the leaves prepare this crude food for use in the growth of the plant, and that the flower produces seeds; but what is the internal structure of the plant, what the mechanism and its workings, are subjects upon which few persons have any definite knowledge. We sometimes see articles which convey the idea that there is a circulatory system of tubes much like the veins and arteries of animals, and that the sap is sent up through them by some force in the root. In order to state intelligibly what is known about the rise of sap through the plant, we must know of what it is made up. An examination of the internal structure of plants is not practicable by the great majority of readers, for the reason that it requires in the first place an expensive microscope, and secondly, a considerable amount of skill in using it. They must content themselves, then, with our figures which show these minute parts and represent things we have actually seen.

Plants and animals differ from mineral substances in the fact that they are *organized*, i. e., made up of distinct parts. If a piece of stone be powdered ever so fine, the microscope will show the powder to be only very small bits of stone, and we may reduce the powder to the minutest possible dust, yet each particle

will be, except in size, like the original lump from which it came. When a vegetable substance is thus examined, the case is different: we find it to be made up of parts, and if the division is carried beyond a certain point, we get fragments which do not represent the whole.

To see these parts of which the plant is made up, in their simplest form, we may take for illustration the early sprout from a seed, cut a very thin slice crosswise, and examine it with a microscope. It will appear as in figure 1—a network of six-sided meshes. In this case we have a cross section filled with holes. Now do these show the mouths of numerous tubes

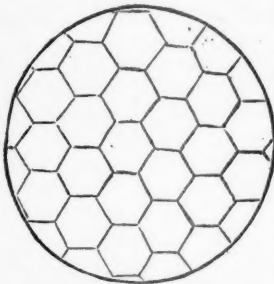


Fig. 1—HORIZONTAL SECTION.

or veins, or what are they? The answer to this must be found by taking a thin slice in the opposite direction, lengthwise of the shoot. Put this under the microscope and what do we see? Pretty much the same thing, except that the little six-sided meshes are somewhat longer in the direction of the length of the part (fig. 2), and we come to the conclusion that the portion of the vegetable under examination is filled with closed cavities, for the strongest magnifier fails to show any communication between one of these six-sided meshes and another. The question will probably occur, are these cavities openings in the mass of the plant, like those in a well-made loaf of bread, or is their nature different? By a little careful boiling or soaking in weak acid, we are able to answer the question and show what is their real nature. With proper management the mass in question may be made to separate into little roundish bladders or bags, each complete in itself. These bodies, represented in fig. 3, are called cells, and of these cells, in some one of their several forms, all parts of all plants are made up. The kind of which we are now speaking is the simplest form, an oval bag of delicate membrane. The contents of the cells will be spoken of in another article; for the present we wish to study their external characters. From what

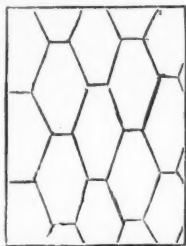


Fig. 2—VERTICAL CUT.



Fig. 3—CELLS.

has been said, it is evident that the divisions forming the network seen under the microscope (figs. 1 and 2) are really double, and we know this to be so, because the cells can be separated. Though the separated cell is more or less rounded, we see that in the mass, (fig. 1 and fig. 2) they are six-sided; and as this difference in appearance may be puzzling to some, it will be well to explain it. If a number of

material, the mutual pressure being equal at twelve points, will bring them into twelve-sided bodies like fig. 4. That pressure on all sides of the yielding cells is the cause of their twelve-sided form, may be shown by a simple experiment. A soap bubble, as ordinarily blown, is spherical, the pressure on all parts of its surface being the same. Now take a clear glass bottle, or similar vessel, and place



Fig. 4—A TWELVE-SIDED CELL.

a little soap suds in the bottom, and then by means of a pipe-stem, rye straw, or some other small tube, blow into the suds so as to fill the bottle with a great number of small bubbles; it will be seen that all those not in actual contact with the glass, will be perfectly twelve-sided. An aggregation or mass of simple cells of the kind above described, is called *cellular tissue*, which forms the greater part of all very young plants; and this is the general nature of the flowers, leaves, and the soft portions of all plants. Being made up of short cells, this kind of tissue has no great amount of strength, and plants which attain any considerable size and need to be stronger, have cells of another shape and much firmer, which together form *woody tissue*; this will be described another month.

Easy Method of Propagating Plants from Cuttings.

The following communication from one of our most successful cultivators, will be valued not only from the simplicity of its directions, but for their source also: "In the January *American Agriculturist* I observe a correspondent from Paris, C. W., making inquiry in relation to a work on Propagation of Plants. As a few simple directions may be acceptable to others of your readers, amateurs as well as professional florists, I will briefly give one of the simplest plans we pursue. We use what we here term 'pans'—that is, the saucer used to hold water below flower-pots—but common kitchen saucers or plates will do equally well. These are filled with sand (any kind that is most convenient) and the cuttings inserted just thickly enough to touch each other, then watered until the sand becomes in a state of mud. This is the only condition of success: that the sand be kept in this half-fluid state until the cuttings are rooted, which will be in from ten to twenty days, according to the condition of the cuttings, and the temperature of the greenhouse or parlor in which they are placed. The best temperature is from 70° to 75°, but it may range from 50° to 80°. If placed in the greenhouse, the saucers should stand on a stage or shelf fully exposed to the sun: if in the parlor, then in the lightest and sunniest spot, and never be shaded, for so long as the sand is kept in a state of mud, the most tender cutting will not wilt. But once allowed to dry, the whole operation will be retarded, if not entirely defeated. When rooted, the cuttings should be potted off at once into good soil, in the smallest-sized pots, and kept well watered until they begin to grow. I may further state that the best cuttings to use are what we term 'young wood'—that is, the young shoot in the succulent state, before it attains its woody or hard character. In this way, roses, geraniums, fuchsias, carnations, verbenas, heliotropes, etc., in fact almost any cutting will root, if treated as above, without a loss of more than five per cent. Your most inexperienced readers can perform

the operation of making a cutting and inserting it in the sand, just as well as I can. They may cut it where they please, at a joint, or otherwise, in length from 2 to 4 inches, and if the foregoing directions are strictly attended to, success is certain. There is but little mystery about any garden operation—a few simple laws understood, and the whole thing becomes easy. But a host of charlatans have endeavored to envelop the most simple operations in a maze of words filling quarto volumes, which would have been better understood if compressed into one page of the *Agriculturist*. The above is not our manner of propagating on a large scale, but it is the most simple and safe for those who have not the facilities of a regular propagating house."

Jersey City, N. J.

PETER HENDERSON.

Winter Apples on Stocks of Early Sorts.

It is a well-known fact that late varieties of apples will in some cases ripen prematurely, and that they will not keep well. This is often accounted for by peculiarities of soil and climate. Geo. B. Cone, of Washington County, N. Y., attributes it to the fact that the late sorts are grafted upon stocks of early varieties. He says that an experience of forty years has convinced him that such is the case, and insists that it is of great importance that seeds for raising stocks intended for late apples should be from long-keeping fruit. Mr. C.'s statement is contrary to the received notions regarding the influence of the stock upon the graft, and we give it a place with a view to call forth the observations of others.

Raising Quince Stocks for Pear Trees.

Several who wish to raise their own quince stocks, have made inquiries of the *Agriculturist* as to their management. First, the kind of quince is of great importance. A very free-growing variety, known as the Angers quince, is the one employed, and is vastly superior to the ordinary slow growing sorts. There are two ways of propagating the stocks: by *Layers* and by *Cuttings*. In obtaining them by layers, a young tree is cut down in spring, to within four or six inches of the ground. This will throw up numerous vigorous shoots which, in the autumn or the following spring, are to be earthed up, raising a mound around them so as to cover the cut portion and the base of the new shoots with several inches of earth. The upper portion of the mound is usually made with a depression, like a saucer, to catch the rains. The shoots thus earthed up, strike root, and are fit for transplanting to nursery rows the succeeding fall or spring. One or two of the shoots are left to continue the growth of the root, which, if the soil is well enriched, will throw up another set of shoots, and thus afford a supply of stocks each alternate year.

In propagating by cuttings, vigorous shoots of six inches to a foot in length, are taken off any time in winter when they are not frozen, and buried in sandy soil below the reach of frost, or in a cool cellar in sand. These are planted out in spring, six inches apart in nursery rows. They should be planted so deep that but one, or at most two buds are above the surface, and but one shoot should be allowed to grow. A. S. Fuller, the well-known nurseryman of Brooklyn is particularly successful with quince cuttings, not losing five per cent. His success consists in the fact that his cuttings are *callused* before they are set out. They are made in the

usual manner, and tied in bundles of convenient size, and the lower ends are dipped in thin mud to the depth of about an inch. This not only prevents the cutting from drying out, but induces the formation of a callus before they are put into the ground. Cuttings thus prepared, if kept in a shed and sprinkled occasionally, will be found to be finely callused by planting time, and when set out will rapidly strike root and make a good growth. In setting out cuttings prepared in this way, or any other, much of the success will depend upon bringing the finely pulverized soil in close contact with them. The soil should be pressed down firmly against the cuttings by the use of a wooden pounder or blunt shovel made of a piece of plank. Both cuttings and layers should be well cultivated, and when budded it should be done as low down as possible. Many trees are ruined by being budded too high on the quince stock. They should always be set so that the junction of the pear and quince comes below the surface; when budded high it is necessary, in order to bring the junction below the surface, to put the quince roots so far in the soil that they decay and affect the health of the tree. The best nurserymen remove the earth around the stock before budding, in order to get near the root.

Wine Grapes in Mo.—Norton's Virginia.

An intelligent correspondent of the New-York Tribune, in a description of the vineyards at Hermann, Mo., gives the following account of this grape: "The Norton's Virginia vine is vigorous, hardy, and productive; starts two weeks later than the Catawba; ripens two weeks earlier, hence valuable for low grounds; bunches medium, compact, sweet and rich; moderately juicy; makes an excellent dark red wine; subject neither to mildew, leaf blight, nor rot. Its small size does not fit it for a table grape so well as some other kinds, though for one's own use it is good enough. When it was first planted here, they inquired of Mr. Longworth, who was authority in all such matters, as to its value; he replied that it was worthless. This discouraged many, but not all. Before Mr. Longworth died, he changed his opinion, and sent hither for a stock of vines of this same variety. The vineyard I was speaking of contains about four acres, set 6 by 8 ft., and trained on trellis; that is, posts 7 feet long and 5 feet above ground are set 10 feet apart, and three tiers of bail wire stretched from post to post, by turns around strong nails. Wire is considered cheaper than slats. The vines are tied with twigs of golden willow. This is quite different from the Cincinnati method, which, briefly, is to plant thicker, to tie to single stakes, and to dwarf the vine. I saw very few grapes at Hermann, tied or trained in this way. In fact, I do not find a similarity of treatment in any two places I have visited." The land is prepared by trenching two feet at a cost of \$75 or \$100 the acre. "To expend so much in preparing the ground for grapes, will discourage some. It is more than a farmer ever expects to get in any one year, or sometimes many years, from an acre of land. The trenching, however, is only a commencement of the expense. At Hermann, the following is their account with an acre of Norton's Virginia; with the Catawba it would be a few dollars less, but only with the first item:

1,000 layer roots.....	\$120	3,000 lath and nails, or	
Trenching.....	75	wire.....	\$18
Planting.....	25	Labor first year.....	25
1,000 small stakes for		Labor second year.....	50
first year, 18 in. long.	4		
1,050 posts.....	84	Total.....	\$401

"It is expected that this \$400 will be returned on the third year, or, at least, that the profits will pay expenses. On the fourth year there will be a full crop, as well as all following years. With the grape mentioned, they get 500 gallons to the acre, which was selling, new, when I was there, at \$2 per gallon. In the spring it will sell for \$3 a gallon; but thus far they have had none on hand at this season, so great is the demand." These facts will be mainly interesting to our Southern readers, as the Norton's Virginia is only half hardy, and will not succeed in the colder portions of the country.

Illinois State Horticultural Society.

LISTS OF APPLES ADOPTED.

The eighth annual meeting of this Society, was held at Alton, on the 15th of December, and was largely attended by members and delegates from other States. Some unknown friend has kindly sent us a report of the proceedings, from which we extract the following lists of apples. The State was divided into three fruit districts:

Northern Illinois.—All that portion north of the Logansport, Peoria, and Burlington railroad.

Central Illinois.—All lying between the above road, and the Alton and Terre Haute railroad.

Southern Illinois.—All south of the last road.

FOR NORTHERN ILLINOIS.

MARKET.	FAMILY USE.	
<i>Summer.</i>	<i>Summer.</i>	Willow Twig,
Red Astrachan,	Early Harvest,	Yellow Bellflower
Car. Red June,	Car. Red June	Tallman Sweet,
Keswick Codlin,	Keswick Codlin,	White Winter
Benoni,	Benoni,	Pearmain,
Early Pennock,	Hocking,	Westfield Seek-no-
Sweet June,	Sweet June,	further,
<i>Autumn.</i>	<i>Autumn.</i>	Roman Stem,
Pomme de Neige,	Pomme de Neige,	Northern Spy,
Bailey Sweet,	Bailey Sweet,	Ramsdell Sweet,
Maiden's Blush,	Maiden's Blush,	Swaar,
Fall Swaar,	Fall Swaar,	
Lowell,	Aut. Strawberry,	FOR TRIAL.
Striped Gilliflower,	Holland Pippin,	Kirkbridge White,
Ramsdell Sweet,	Lowell,	Dutchess of Old-
Yellow Sib. Crab,	Rambo,	enburg,
<i>Winter.</i>	Striped Gilliflower	Fall Orange,
Wine Sap,	Dyer,	Northern Sweet,
Rawles Janet,	Mother,	Fall Wine,
Domine,	Haskell Sweet,	Montreal Beauty,
Jonathan,	Yellow Sib. Crab,	Transcend't Crab,
Willow Twig,	Fulton,	White Pippin,
Gilpin,	<i>Winter.</i>	Tompkins Co.
Minkler,	Wine Sap,	King,
Tallman Sweet,	Rawles' Janet,	Hubbardston
Yellow Bellflower,	Domine,	Nonsuch,
	Jonathan,	Broadwell,
		Newtown Pippin,
		R. I. Greening.

FOR CENTRAL ILLINOIS.

MARKET.	FAMILY USE.	
<i>Summer.</i>	<i>Summer.</i>	Jonathan,
Early Harvest,	Yellow June,	Pryor's Red,
Golden Sweet,	Early Harvest,	Swaar,
<i>Autumn.</i>	Sweet June,	White Winter
Bailey Sweet,	Red Astrachan,	Pearmain,
Maiden's Blush,	Keswick Codlin,	Roman Stem,
<i>Winter.</i>	Ramsdell Sweet,	Peck's Pleasant,
White Winter	Am. S. Pearmain,	Esopus Spitzen-
Pearmain,	Benoni,	berg,
Domine,	Car. Red June,	Wine Sap,
Wine Sap,	<i>Autumn.</i>	N. Y. Pippin,
Ben Davis,	Maiden's Blush,	Rawles' Janet,
Willow Twig,	Fall Wine,	Newtown Pippin,
Rawles' Janet,	Buckingham,	Ortley,
Sops of Wine,	Bailey Sweet,	Lady Apple,
(upon rich lime-	Fulton,	FOR TRIAL.
stone soils, and	Hub. Nonsuch,	Early Joe,
with high cultiva-	Aut. Swaar,	Downing's Para-
tion.)	(of the West.)	gon.
Newtown Pippin,	Pomme de Neige,	Rome Beauty,
	<i>Winter.</i>	Ladies Sweeting,
	Domine,	Sweet Romanite,
		White Pippin,
		Nickajack.

FOR SOUTHERN ILLINOIS.

MARKET.	FAMILY USE.	
<i>Summer.</i>	<i>Summer.</i>	Pearmain,
Early Harvest,	Early Harvest,	Pryor's Red,
Red Astrachan,	Large Yellow	Newtown Pippin,
Car. Red June,	Bough,	Rawles' Janet,
<i>Autumn and</i>	<i>Am. Summer</i>	FOR TRIAL.
<i>Winter.</i>	<i>Pearmain,</i>	Yellow June,
Yellow Bellflower	<i>Autumn and</i>	Sine-qua-non,
Wine Sap,	<i>Winter.</i>	Porter,
Rawles' Janet,	Rambo,	Rome Beauty,
Newtown Pippin,	Yellow Bellflower	N. Y. Pippin,
Pryor's Red,	White Winter	Willow Twig,
		Nickajack.

These lists were made up by practical cultivators and will be valuable to our readers in Illi-

nois, though it seems to us that the number of varieties selected is unnecessarily large.

About Seed and Nursery Catalogues.

These publications, though they have a restricted class of readers, are useful both to the publisher and the reader. Nurserymen are apt to think that a large catalogue, containing lists of every known variety of fruit, is necessary, and likely to bring customers by conveying an idea of the extent of their establishments. The fact is, that these large catalogues are confusing to all except experienced promologists; and a choice list of fruits, with brief and correct descriptions of their qualities, will best suit the wants of a large majority of purchasers. It is safe to say that more than half of the varieties which encumber the catalogues, may be stricken out of cultivation without injury to the cause of fruit culture. A few plain and practical directions for the planting of each kind, distance at which to set, and the after-treatment required, may appropriately accompany the list of varieties. Many of the catalogues now before the public, are very creditable to the establishments from which they are issued, being not only good as advertising mediums, but valuable as concise little treatises on fruit culture. We regret to say that there are some,—very few however,—who have made use of their catalogues to elevate themselves by maligning their brethren, and thus perverted their publications from their legitimate uses. Horticulture is benefited by a generous rivalry, and but few who follow it from a love for it, are capable of entertaining ungenerous sentiments toward their associates. If there be any who are bitter and ungentlemanly, we advise them not to publish the fact in their catalogues. Whoever does so should recollect that he brings disgrace upon his fraternity, impairs his own influence, and shuts himself out from the sympathy of all true lovers of horticulture.

Grapes in Northumberland Co. Penn.

The following from the Sunbury American will interest many of our readers, especially that portion which relates to the little known Creveling. This testimony has none the less value from the fact that the Editor, Mr. Masser, is an amateur cultivator, and is not concerned in the sale of any particular variety:

"The Creveling is a native of this section of Pennsylvania, and was taken from the forest some 20 years since, by Mr. Creveling, who resided near Bloomsburg. It has also been called the Catawissa, from the place where it was cultivated by Col. Paxton and others. This grape is not only a 'fair grape,' but is decidedly one of the best of our native varieties. It resembles the Isabella in size and appearance, though perhaps larger and more nearly round. It is, however, a much sweeter and more highly flavored grape. In separating the stem from the fruit, the flesh that follows is red, which in the Isabella and Concord is white—but it is not as early as the Hartford Prolific by eight or ten days, though, perhaps, a week earlier than the Concord. This, at least, has been our experience, but different latitudes no doubt produce different results. The Hartford Prolific is the earliest grape we have, and with us was fully ripe the last of August. It is sweet, but rather thick-skinned, and has a tendency to drop its fruit when ripe. It is, however, a prolific grower and a good bearer, and being the earliest va-

riety, deserves general cultivation. The Concord is not only hardy, but when fully ripe, sweet and highly flavored. It is a buttery grape, more solid than the Creveling, and, like the Diana, more compact in its clusters, and a better keeper. The Louisa and Clinton we consider no improvement on the Isabella, and hardly equal. They are, with us, but little if any earlier. The Diana is a vigorous grower and a prolific bearer. Being a seedling of the Catawba, it has some of its characteristics—but it is some weeks earlier and has a peculiar honey sweetness. It is preferred by many to any other variety, and though a third smaller than the Catawba, it is still larger than the Delaware. The Delaware is deemed a slow grower, although we have grown a vine the past season with two branches each about twenty feet long, it being the second season after planting, having been cut back to two buds. Proper planting with drainage, good soil, bone dust, etc., with occasional applications of soap suds, did the work, while another vine, not thus treated, did not grow six feet."

Forest Trees from Seed—Evergreens.

It is a matter of surprise that in a new country like ours, there should be any scarcity of trees. We do not refer to the prairie regions, which are naturally destitute of forests, but to the longer settled and originally well-wooded portions, where wood for timber and fuel are now both scarce and dear. The settler in a forest country, from the hard work it costs him to make his clearing, learns to look upon a tree somewhat as his natural enemy, and the groves are cleared off without any reference to the future wants of himself or his successors. The evils of thus destroying the forests, without making any provision for their renewal, is being severely felt, not only in the lack of the material they furnish, but in the drying up of streams, and in the change produced in the climate of the regions thus denuded. From the many queries we receive about the growing of trees from the seed, not only from the prairie States, but from the older parts of the country, it is evident that there is an awakening to the subject of arboriculture—and doubtless before many years, the planting of forests will become as common here as it is in Europe. The planting of timber trees becomes a matter of absolute necessity upon the prairies, and in the Eastern States there are large tracts which can not be tilled, but which, if covered with trees, would yield a good return. As a general thing, the trees must be started from the seed, as natural seedlings usually grow under conditions unfavorable to the formation of good roots. While some kinds may be raised in nurseries with as much ease and in the same manner as fruit trees, and afterward be set out in the plantation, others can not be transplanted, and the seed must be sown where the tree is to stand.

Even the hardest forest trees are generally very delicate when young, and need shelter both from cold winds and from the sun. In the natural state, the seedlings are nursed by the undergrowth of shrubs, and in artificial planting, the rapidly growing and the hardier sorts are sometimes raised to act as nurses to the slow growing kinds, or the seed is sown so thickly that the young plants shelter one another, the superfluous ones being removed as the growth progresses. It is probable that the introduction of the White Willow will be of benefit to tree culture at the West, as this grows rap-

idly from cuttings, and may often serve to protect the early growth of more valuable kinds.

The seeds of the various forest trees require such different treatment, that no general rule can be given, and it will be necessary to regard the peculiarities of each sort to ensure success. While some kinds retain their vitality for a long time, others must not be allowed to become dry, or they will never germinate. The seed of some maples and the elm ripen in the spring, and the plants are produced the same year, while the seeds of many other kinds often lie a whole year in the ground before they come up.

The evergreens comprise some of our most useful trees, being not only valuable for their timber and the shelter they afford, but for the cheer their foliage imparts to the winter landscape. The White (or Weymouth), Pitch, and Scotch Pines, the Norway and Black Spruce, Hemlock, European Larch, (not evergreen) Arbor Vitæ and Red Cedar, are hardy, and the best known and most useful of the *conifers*, while several species now cultivated for ornament only, will probably in time become common.

The seeds of most of those mentioned are borne in cones, the scales of which open and allow them to fall out. The seeds are small and have a thin wing which causes them to be distributed to a considerable distance by the winds. The cones should be gathered before they open and scatter the seeds; some of them open by simply placing them in a dry room, while others, like the Scotch Pine, open with difficulty. It has been recommended to soak these in water, and then dry them by artificial heat. A cultivator of our acquaintance breaks them up by boring through the cone lengthwise with a small bit; this breaks up the central stem, and the scales fall apart without injury to the seeds. The seeds can be purchased at the large seed stores; they should be of the previous season's growth, bright looking, plump and heavy.

In some cases the seed is scattered broadcast, trusting to the natural growth of shrubs to afford the requisite protection to the young plants. This method is very wasteful of seed, as much is destroyed by animals, and but very few can be expected to fall in spots entirely favorable to germination. It is much better to sow in a seed bed where all needed care can be given to the young plants. The soil of the bed should be fine, light, and rich, and the sowing should be in rows to facilitate weeding. The covering of earth should be very slight, $\frac{1}{4}$ to $\frac{1}{2}$ of an inch being sufficient. To prevent drying, the surface of the bed should have a covering of leaves or light hay, which is to be removed as soon as the plants show themselves. A coating of sawdust is also used for this purpose, and has the advantage that it need not be removed. The young plants need shading, which is done by means of leafy brush stuck thickly over the bed, or made into a kind of screen or hedge upon the south side of it. A far better way is to make the beds in frames like those of a hot-bed, and shade them with gratings made of lath placed about $\frac{1}{2}$ an inch apart. These will afford light and air, while they prevent scorching by the sun, and the frames break the force of cold winds. The young plants are kept in the beds for two years, giving the soil each winter a covering of two or three inches of leaves. At two years old the plants are set in good soil, in rows 3 feet apart, and 1 foot in the row, where they remain two years, when they may be put out in plantations, or receive another transplanting in the nursery, at a greater distance in the rows.

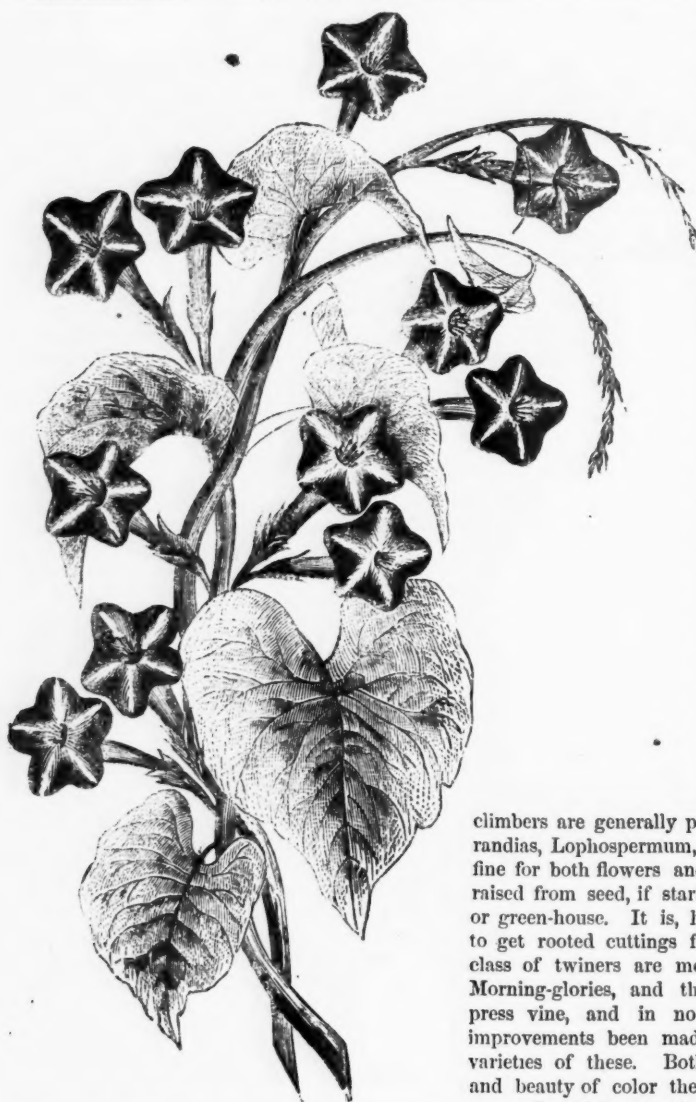
The seeds of the Red Cedar differ from the others we have mentioned, in being enclosed

in little berry-like cones, the fleshy scales of which do not open. These seeds remain in the ground a year without germinating. They may be kept mixed with earth and buried for a year, and then sown. The treatment of other forest trees must be deferred to another article.

Native Broad-leaved Evergreens.

By the term evergreen, most persons mean the narrow-leaved trees and shrubs of the pine family, forgetting that there are a number of broad-leaved shrubs which keep their foliage all winter, and are properly included with the evergreens. In looking through the New-York markets about the holidays, we were struck with the enormous quantities of evergreens on sale for decorative purposes. They are brought in wagon-loads, and even vessel-loads, to meet the great demand. Among these were a number of our native broad-leaved shrubs which are so prized for in-door decorations, and we wondered why they were so seldom used to ornament grounds and gardens. They are beautiful for their foliage all the year round, and some of them are valuable for their flowers. They grow naturally in shaded locations, and when planted they should have a partial shelter from the hot sun. First among these we place the American Holly (*Ilex opaca*). The English Holly, so thoroughly associated with the Christmas festivities of the old country, is not adapted to our climate, but our native one is generally hardy, and nearly as fine. It is found as far north as Massachusetts, and is very abundant in New-Jersey. It is usually a small neat tree, though it is sometimes found 30 or 40 feet high. The leaves are thick, dark green and shining, and have several sharp spiny teeth on each side. The flowers are not showy, but the bright red berries which succeed them are very brilliant when contrasted with the dark green of the leaves. Being a very slow grower, the Holly in cultivation ranks as a shrub rather than as a tree, and as it bears cutting well, it makes an excellent hedge, the only objection being the time it requires to reach a suitable size. Plants may be had at the nurseries, or they may be raised from the seed, which usually remains in the ground for a year before germinating. According to Downing they start very readily if scalded with boiling water before sowing.

The Ink Berry is a pretty shrub belonging to the same genus. It is the *Ilex glaber*, and grows naturally in sheltered places with much the same range as the Holly. It is from two to eight feet high, with very slender branches, and with narrow, dark green, polished leaves. It bears jet-black berries, whence its popular name. The foliage is much prized by bouquet makers, and large quantities are brought to this city for sale to them. The common Laurel, *Kalmia latifolia*, is another evergreen very common from Canada to Florida, and though seldom seen in cultivation with us, yet from its fine foliage and large clusters of white or rose-colored flowers, it is one of the most prized shrubs in English gardens. It is a little difficult to transplant from its native localities, but is so fine a shrub that it is worth all the trouble it costs. It is found in both wet and dry situations, and in transplanting, those should be selected from the natural locality the nearest like that in which they are to be placed, and be removed in the spring, with a good ball of earth at the root. They may be raised from the seed, and small plants may be had at most of the principal nurseries, at a moderate price.



A Pretty Twiner—the "Star Ipomoea."

(Quamoclit coccinea.)

Every one who likes the "Cypress-vine," will be glad to know that it has an own brother which is a more rapid grower, and much harderier. This is the *Quamoclit coccinea*, a native of Mexico, and which, though naturalized in some of the warmer portions of the country, is but little known in cultivation. The plant was recently brought forward by one of our seedsmen under the name of Star Ipomoea, which will do well enough for a garden name, though it really belongs to the genus *Quamoclit*, and is not an *Ipomoea* at all. It has not the exquisite delicacy of foliage that characterizes the Cypress-vine, but excels it in the number, brilliancy and duration of its flowers, which in cool days keep open until the following morning. They appear in clusters of from 18 to 24, springing from the axils of the heart-shaped leaves. The engraving represents the flowers and leaves of the natural size. It is an annual, and its culture is like that of the Morning-glory.

Twining and climbers differ in the manner in which they attach themselves to trellises or other supports. The twining, like the Morning-glory, coil themselves around the stake or string, while climbers attach themselves in some other way. The sweet Pea climbs by means of tendrils, while the Nasturtium and some others coil their leaf-stalks around the support. They

are very useful in gardens, either to cover unsightly walls and fences or to add variety when grown by themselves on suitable trellises. One of the prettiest supports is made of a young red cedar, with the limbs cut off to within about a foot of the trunk and left rough. Fanciful forms may be made with poles and cords, or wire, but to our taste the simpler these are made the better. It is a common mistake to make these supports too frail, as when loaded with vines they offer a large surface to the action of the winds, and are readily broken. Frames intended for annuals should be so arranged that they can be removed and housed for the winter; those for woody

climbers are generally permanent. The *Mauandias*, *Lophospermum*, and *Cobæa*, are all fine for both flowers and foliage, and may be raised from seed, if started early in a hot-bed or green-house. It is, however, much better to get rooted cuttings from the florists. No class of twining are more popular than the Morning-glories, and the nearly related Cypress vine, and in no plants have greater improvements been made than in the newer varieties of these. Both in size of flower and beauty of color the *Ipomoeas*, *limbata*, *hederacea*, *Burridgei* and others are vastly superior to the common variety, and grow nearly as readily. With these and with the Cypress vine a fine show can be made. They are all very easily cultivated, asking nothing more than good garden mould, and ordinary attention. The seeds of the "Star Ipomoea" shown in the engraving, and of the other sorts mentioned will doubtless be on sale by most seedsmen this season. Our advertising columns will give the address of several reliable parties.

A Talk about Onions.

In the talks about cabbages in the two preceding numbers, it was shown that the eatable portion of the cabbage is merely an enormous bud, growing upon the end of the stem, the leaves of which it is composed, being thickened by an accumulation of nutriment; that in Brussels Sprouts this nutriment is mainly stored in smaller buds growing along the stem, and that these are accordingly the useful product; while in the Kohl Rabi, the stem itself is made to hold the nutritious deposit and becomes the eatable portion. In all these cases we appropriate as food that which the plant had accumulated, to be used the following year by itself in the production of seed.

In the present article we shall treat of the different varieties of onion in a similar manner, the object being to induce our readers to look into the real nature of the common things about

them. The majority of persons, if asked, what is an onion? would probably reply that it is a root, and would be surprised if told that the eatable portion is, as in the ordinary cabbage, a large bud. It is a common impression that everything which grows underground must be a root; but the fact is, that not only stems but buds, and in rare cases, even flowers grow beneath the surface. It may seem difficult to see

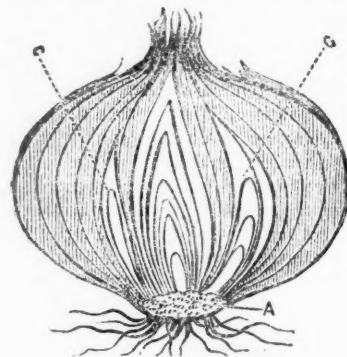


Fig. 1.—VERTICAL SECTION.

at first any possible similarity between a cabbage and an onion, but a little careful observation will show that they are alike in nature, though so different in character.

To examine the structure of an onion, divide it by cutting through from top to bottom, and it will be found to present an appearance like fig. 1. The bulk of the onion is made up of scales, lying one over another, and these are really the thickened lower portions of the onion leaves. The leaves being hollow cylinders, their bases are similarly shaped, and when cut across, show a series of concentric rings, as seen in fig. 2. The scales are attached to the stem, a,

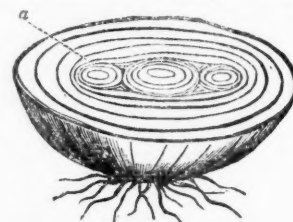


Fig. 2.—HORIZONTAL SECTION.

fig. 1, which is so small that it might be overlooked. Though very short, being much broader than long, this is all the proper stem the onion has, and it bears leaves upon the upper surface, and roots from the lower one. During the first year of the growth of the onion from the seed, it is occupied in preparing material which is to produce flowers and seed the second year, and this is deposited in the bases of the leaves, which thicken up so as to form a more or less globe-like body, while their upper portions hav-

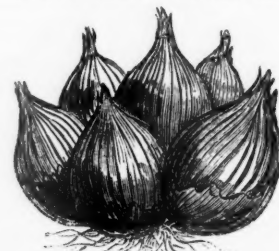


Fig. 3.—POTATO ONION.

ing done their work, wither and decay. It will be seen then, that the onion is not a root at all, but a large bud. That its nature is such as we have described, may be proved by examining one in a growing state, where the green leaves will

be found to terminate below in the thickened scales. Besides these scales, there are formed during the first year several small buds within the larger one, (c, fig. 1, and a, fig. 2,) which are on the short stem and in the axils of the leaves, just where most buds above ground are situated.

Now compare fig. 1, with the engraving of a cabbage as shown on page 13 (January No.); if the cabbage stem were reduced so as to be a narrow strip, the resemblance would be apparent, notwithstanding the difference between the leaves which make up the two. Note that we are not trying to show that an onion is a cabbage, or vice versa, but that both are buds of the respective plants, and that both accomplish the same end in a different though similar manner.

When the onion is set out in the spring, the little buds, d, grow and become bulbs at the expense of the nutriment contained in the scales which perish after the offspring has made a good start, and has leaves and roots of its own; these at length produce flowers and seed, and then perish. This is the career of the onion from the seed, or "black seed" as it is usually called, and it has for its object the perpetuation of its kind. The common onion is continued by seeds, but the same end is attained in different ways in other varieties. A variety called the Potato or Multiplier-onion does not bear seeds, but perpetuates itself without their aid. When this kind of onion is planted, the small buds, (c, fig. 1,) increase in size, but instead of throwing up flowering stalks, the lower parts of their leaves thicken up and form scales, and become a cluster of small onions, (fig. 3,) partly at the expense of the parent, and partly by the aid of their own roots and leaves. These small onions are planted out singly the following year, when they increase in size, and form a large onion having small buds within it as before, and which planted another year would produce another cluster of small onions, and so on for each alternate year. Here we see a plant may be kept on indefinitely without the aid of seeds.

The Top-onion is reproduced in a still different manner; here the full sized onion when planted throws up a flower stalk, but instead of flowers, a cluster of little bulbs (Fig. 4) is produced in their place. We know that in fruit

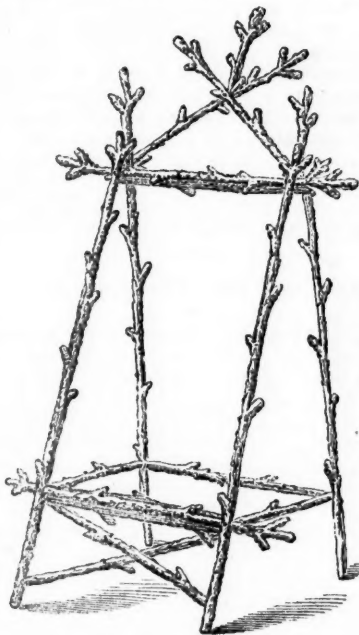


Fig. 4—TOP ONION.

trees a flower-bud may appear in the place of a leaf bud. Here we have the position ordinarily occupied by the flowers filled by a cluster of bulbs, or what are really leaf buds. These little bulbs when planted grow to large onions, which in turn will produce a crop of small ones in place of seeds. As in the case of the Potato-onion, the variety is continued, though no seeds are borne. These last two are merely varieties of the common onion, in which certain peculiarities have become fixed by cultivation.

THE best cough mixture: A suit of warm clothing, mixed with plenty of air and exercise.

THE HOUSEHOLD.



A Rustic Carte de Visite Frame.

The engraving represents a very neat and tasteful frame for holding a *carte de visite* or other small picture, sent to the *Agriculturist* Office by Miss "M. L. M.," Glenwood, N. Y. It is made of slender twigs of some evergreen; larch is best. The parts are fastened together by common pins, and the whole is varnished over. It makes a pretty ornament for the mantel-piece or center-table, very easily constructed by every one. Any variation suggested by the fancy can readily be introduced.

How to Make a Good Cup of Coffee.

A subscriber to the *American Agriculturist*, "F. G.," gives the following directions: The best coffee is usually Java. Mocha, obtained from the city of that name, is no doubt best, but there is so little in market that it need not be considered here. Maracaibo is a good coffee, with a small bean, and it will brown well, and take on a good gloss, which not all coffee will do,—and this is an indispensability. A good article of coffee will be clear, and free from all taint. Coffee has a slightly bitter smell of its own. Let the coffee be as old as possible, as it is improved by age, though old coffee is very apt to have taken on a foreign odor.—First remove all imperfect berries, gravel, dirt, etc., and then put into a dish as much as can be successfully browned at one roasting. Unless you have a regular coffee-browner, use a flat iron dish, one somewhat thick: it should be thicker than sheet-iron, unless the bottom is very even, and sets evenly on the oven-floor. A dripping-pan is not so good as a spider or frying-skillet. Set on the stove until the moisture is evaporated. A hot fire is required for this. From half a pound to a pound, according to the size of the skillet, will do for a roasting. Put it into the oven, which must be somewhat hotter than is necessary to bake bread, and keep closed except when necessary to stir the coffee, which should be done every minute, always being careful to keep it well and evenly spread on the bottom of the vessel. With a knife or spoon, stir around the edge of the dish in a circle two or three times, and several times across. Be sure not to allow the grains to burn on the bottom, where the vessel touches the oven. This operation of stirring should be done as quickly as possible, for it is necessary to keep the heat as uniform as possible. [A more convenient way would be to cover the skillet with

a pan, and then keep it shaking.—Ed.] A slight smoke at first, gradually increasing, will soon conclude the roasting. Just at this point is the critical time. A little too much heat, and you have coal, which gives coffee a bitter taste. Rather, for the first few roastings, have a little less heat, so as to brown the coffee in twenty, instead of fifteen, or twelve minutes, as may be done. As it is, you will be apt to get into the coal now and then. But generally this is slight, and affects only a few grains. Pick these out, and also the yellow berries, which are imperfect, and have a bad taste.

When the coffee is done, it has the color of a chestnut, which is darker than the browned coffee of commerce; this also needs the above sorting. Such coffee is seldom browned enough, and is greatly improved by browning over, giving it the chestnut tinge which will increase its strength, and develop its flavor, that is still latent. Heat will set free this hidden aroma from the cells, but it will escape and be lost, unless arrested. This is done by at once removing the coffee from the oven when it is done, and putting it into a tight vessel, corking it well. We like a bottle best, as then the berry will show distinctly, and the process of improvement may be noted; for coffee, like wine, improves with time, both before and after browning.

Coffee, when browned as it should be, will have a coating of oil, which will gather more and more, and in spots. This is the fragrant oil that gives its fine aromatic, not pungent taste. Exposed to the air, all this escapes, as is the case with the browned coffee of commerce, which has no coating, no drops of oily perspiration, no fragrance,—only a harsh, grocery smell. We have kept coffee thus bottled and corked for a year or more, and found it better than at any previous time.

The coffee is yet to be made. Take out what is wanted, and cork tight again. Grind as fine as possible. This is important. An old, well-worn mill is best; at least so we find it. Mix as much of the white of a fresh egg as will just moisten the coffee, without making it lumpy, otherwise there will be less strength obtained, as the egg when cooked will prevent the water from reaching the coffee. Next, fill with what hot water you want; put in the coffee, and boil four or five minutes. If ground very fine, a little less time will do. Then set off, and in a minute or two pour out. Immediately add sweet cream and pure white sugar. [If you have no cream use *dotted* milk.—Ed.] And now for a point not generally understood: Let the coffee stand five minutes, stirring it occasionally: then drink. It takes five or more minutes for the cream to unite with the liquid; if drank at once, the cream is readily tasted. If permitted to stand, it will gradually deepen its color, until quite brown. The cream has then disappeared, and you have coffee.



Pattern for Marking a Handkerchief.

The above very neat design for marking the corner of a pocket-handkerchief, may be readily copied upon tracing-paper, and then used in embroidery; or the pattern may be marked directly upon the linen with a fine-pointed pencil, by holding the two together against a window-pane.

About Paints and Varnishes.

Owing to the present high prices of paints and oils, several inquiries have recently been addressed to the *American Agriculturist* with respect to substitutes for the old materials. After some investigation, we can not learn of any thing new to take the place of Linseed Oil (that made of flax seed). This belongs to the drying oils, that is, those which when exposed to the air absorb oxygen and harden into a kind of resin-like solid. The chief of them is the linseed oil; belonging to the same class are the oils of rape seed, cotton seed, poppy seed, and of several kinds of nuts. The animal oils or fat oils, and the vegetable oils, will not dry to hardness. Some of them evaporate almost wholly. Linseed oil is the great basis of all drying paints. This dries slowly when raw, but boiling destroys the mucilaginous portions, and it then dries rapidly. In boiling for painter's use, a small quantity of red lead, litharge, or umber, is added to increase the drying properties; and when very rapid drying is required, some more of these materials in the form of "patent dryers," are added in mixing the paints.

Various substances are mixed with the oils to increase the body and to give color, the chief of which are white lead (a carbonate of lead oxide) and oxide of zinc. Zinc is as yet the most expensive, but has the advantage over lead for white paint in not being colored by gaseous exhalations, and is best for painting about sinks, privies, stables and such like places. Lead gives a heavier body, and is most used for the first coat; but, pound for pound, zinc whitens a much larger surface and is therefore not much more expensive, while its more permanent retention of a pure white makes it preferable for the last coat in all white painting. The different shades of color are given by small portions of various substances, as lamp black, chrome yellow, chrome green, Prussian blue, etc.

Paints when to be applied, are thinned with spirits of turpentine; but owing to the enormous increase in the cost of that article, a substitute has lately been discovered and applied, which answers moderately well. This is a product obtained in refining petroleum or coal oil, and is called by various names in different parts of the country, such as benzine, benzole, and naphtha, all meaning the same thing.

VARNISHES are solutions of various resins, which are applied over paints to give finish and durability. The most extensively used varnish is the copal, made by melting gum copal, adding linseed oil and spirits of turpentine. In this also, benzine is being largely substituted for spirits of turpentine, but the varnish is not considered as durable, and until this point is settled, the turpentine varnish is to be preferred, at least for all good work, even though costing much more. The varnish is variously modified by the addition of more or less oil, to make outside and inside varnish, or coach varnish, furniture varnish, etc.

A Distressing Malady.

The following, which we find in the columns of an English journal, accurately delineates the effects of a mental malady which, if left uncured, will blight the peace of any household or society wherein the victim remains. If any reader here recognizes features of his own portrait, let him at once resolve reform: "Peevish people are always unjust, always exacting, always dissatisfied. They claim everything of others, yet receive their best efforts with petulance and disdain. Such men complain, too, of being ill-treated by their fellows. Ill-treated! The mildness of an angel and the patience of a saint could not treat these sour-tempered people in a manner that would satisfy them. The habit of peevishness grows upon a person until it renders him wholly incapable of conferring any happiness upon others. It distorts the imagination, and disorders the mind, so that truth cannot be distinguished from falsehood, or friendship from enmity. It is one great source of envy and discontent, poisoning the

fountain of life, and scattering ruin and desolation on every side. Those who occupy their minds about anything serviceable to those around them are seldom peevish; it is only those who feed a disordered fancy with self-generated fiction that become misanthropic or grumblers. Then incessant fault-finding arises, which is as annoying as it is unjust. Did peevish people know, or could they feel, the effect of their reproaches on others, those reproaches would never be made. But the possessor of a peevish turn of mind thinks of nothing but himself. For others he cares nothing; while he claims the greatest deference for himself, he will not defer to others in the slightest degree."

The Child's Weekly Bath.

"L. S.," sends the following to the *American Agriculturist*: "Besides your vessel of warm water, castile soap, brush, and towels, have also a small vessel containing a pint of cold water in which is dissolved a tablespoonful of salt. As each limb, or part of the body is washed, before wiping, sponge over with the salt water. After the body is dry, rub a little sweet oil upon the chest, and upon all the joints, using friction with the hand until every part is aglow; this latter operation occupying about five minutes. Then let your child have light suppers, regular sleep, and plenty of exercise in the open air, and you probably will not see diphtheria, blotches on the skin, or an emaciated face, but instead thereof, a healthful, ruddy, cheerful countenance.—The very same treatment will be worth \$50 to any adult over forty years of age, as forestalling rheumatism, colds, coughs, and fevers."—[The bathing, or cleansing the skin, the smart friction, the exercise, and the light suppers, are all right; but we do not see the propriety or advantage of the "salt," or the "sweet oil," for general or constant use. A very little soap, to be washed off well with clean water; and a quick operation, to prevent any chill; a smart friction to remove the loosened excretions from the skin, and to start up a glowing circulation, are the essentials for the weekly or semi-weekly thorough bath.—Ed.]

Various Customs—Forks versus Knives.

A lady contributor writes to the *American Agriculturist*: "In Henry the Eighth's time, a porpoise was a favorite dish in aristocratic circles; to-day, the meanest English beggar would disdain to partake of it. In our grandfather's time, a dinner of horse-flesh offered to a friend would be considered equivalent to an insult; to-day, many of the elite of Paris have it on their tables. As to frogs, we cease to ridicule the French in using them, for they are no longer a forbidden dish among Americans, but are found on the bills of fare at many eating houses. In our grandmother's time, people ate with their knives or forks or spoons, just as they pleased; it was etiquette to do as they liked—as it is said to be in the Court of Austria, at present. In this country, refinement has progressed so far that it is considered vulgar for a person to put his knife to his mouth. I have been amused to see the stress writers on etiquette lay on this little point. Half in earnest, and perhaps half in satire, is a soliloquy of the 'Autocrat of the Breakfast Table,' in one of his brilliant essays which says: 'In this democratic American republic, it is not improbable—though we have never yet had any President save of good family and high standing in society—that the people may raise up one of the common class, one of themselves, in fact, to the highest office in the nation. We will suppose it to be the case, and that this President should have as a wife, a refined and highly cultivated woman who tries in vain to have him overcome the little vulgarities that still cling to him; he will eat with his knife, and the lady wife in despair, puts her knife to her mouth too. How much easier to put it to her heart,' he adds tragically."—[The custom of carrying food to the mouth with the fork, came with more general use of silver or plated forks, made in convenient form

for the purpose. Where these are not on the table, it would seem to be a matter of indifference which implement is used. It is absurd to attempt to rule any out of the pale of society merely because they have not kept up with all the changes and whims of fashion; for such a reason as this, none will be excluded but those whose only claim for admission is based upon their knowledge and observance of such trifles.—Ed.]

How to Cure Hams and Beef.

Joseph K. Hulme, Burlington Co., Iowa, contributes to the *American Agriculturist*, the following directions for curing hams and beef, by which he says he has satisfactorily treated many thousand pounds of meat for home use and for market: Provide a sweet, clean, tight cask or tub. Weigh the meat, pack it neatly but not too closely, sprinkling a few grains of coarse salt upon each piece, and cover with a weight to keep the whole in place. Take enough clear soft water to cover the whole, and dissolve in it good Turks Island salt until a fresh laid hen's egg will float enough to show the size of a dime above the surface. For every 16 lbs. of meat, dissolve 1 oz. saltpeter in hot water, add 1 gill of molasses for each oz. of saltpeter, stir the mixture into the pickle, and pour the whole upon the meat, which should be entirely covered. Hams should remain in this pickle three weeks; then take them out to drain. If the brine be not strong enough to float the egg as before, add sufficient salt to bring it up. Replace the hams and let them remain four weeks longer. Then hang to drain, and afterward smoke them with hickory or apple-tree wood, until they are about the color of mahogany.

Beef should remain in the pickle six days, at first; then be removed and drained, and again replaced for six days longer. After this drain, and smoke, the same as hams. Meat so prepared is known in many places as "Jersey Red," and is of first quality.

Another Beef Pickle.—Mr. David Garigus, of New-Haven Co., Conn., sends to the *American Agriculturist* the following: To 100 lbs. beef, take 4 quarts salt, and $\frac{1}{2}$ an oz. saltpeter; rub the beef well with it, and pack closely, in clean barrels; let it stand a few days, and then draw off all the brine which has formed. (This first brine is bloody and would hurt the beef if left on.) Then make cold brine strong enough to bear an egg, adding $\frac{1}{2}$ an oz. saltpeter and cover the beef with it.

Improved Buckwheat Pancakes.

"F. G." writes to the *American Agriculturist*: "The finest, tenderest pancakes can be made by adding a little unbolted wheat (or Graham) flour to the buckwheat. Less than a quarter will do. Mix with cold sour milk, or fresh (not sweet) butter-milk, which is best. The soda, (emptyings are dispensed with,) when put into cold batter, will not act satisfactorily. Bake at once. The heat will start the effervescence, and as the paste rises it will bake, thus preventing it from falling. Hence the culminating point of lightness is attained. The batter rises snowy and beautiful, and the pancake will swell to almost undue dimensions, absolutely the lightest and tenderest that can be baked, with not a touch of acid. More salt, however, must be added than is usual, to counteract the too fresh taste when soda alone is used. Thus the bother of emptyings is all dispensed with. Pancakes in this way can be baked at any time, and on the shortest notice. We keep our flour mixed, the Graham with the buckwheat, ready for use."

TAINTED BARRELS AGAIN.—The following method sent to the *American Agriculturist* by James Parpet, Warwick Co., Ind., is warranted by him to cleanse any vessel however strongly tainted. For a 40-gallon cask use 1 peck of unslacked lime, or about in that proportion. Place it in the cask and pour water enough upon it to make it the thickness of cream. Stir it well as it slacks, and turn the barrel to cover every part. After it has stood 24 hours,

wash clean with hot, and rinse with cold water, and let it stand in the open air two or three days. If the cask or vessel be very foul, repeat the process.

Hints on Cooking, etc.

Liebig's Soup.—Chop lean beef fine as for mince meat. Mix it uniformly with its own weight of cold water, heat it *slowly* up to the boiling point, and let it boil briskly for one or two minutes. Strain the liquor through coarse linen, add salt and other seasoning, and it is said to form the strongest and best soup that can be extracted from the meat.

Soup from Mince Pie Meat.—It may be new to some young housekeepers, that the liquor in which beef has been boiled for making mince pies, is worth something. We have known experienced cooks to throw it away. It contains materials for a good soup. After the meat is taken out, boil the water if necessary until it is strengthened by evaporation of the superfluous moisture, add vegetables and seasoning, and you have a good dish for the following meal.

To Finish a Baked Potato.—A housekeeper suggests to the readers of the *American Agriculturist*, that baking or roasting in the oven is the best way of cooking potatoes, with which all will doubtless agree. In the days of wood fires, roasting them in the hot ashes, was thought the best. She says that when they are sufficiently cooked, the quality will be greatly improved by cracking the skins open, and then allowing them to dry out a few minutes before taking them to the table.

Baked Squash.—Have any of the readers of the *Agriculturist* tried this? We suggested this method of cooking squash to a friend who had never heard of it before, and in a few days he came in to thank us for having given him a "new wrinkle." It may be new to some others, and to such we would say, cut up the Hubbard, or other fine-grained varieties, into convenient pieces, and bake as you would sweet potatoes. Children are very fond of it, and it is not bad for older people.

Scalded Cream.—In answer to an inquiry in January *American Agriculturist*, page 6, "E. H.," of Staten Island, writes: Strain the milk into tin pans, (those holding 8 or 10 quarts are the most convenient,) and let it stand 10 or 12 hours. Then carefully place it on the stove, or to prevent the milk from burning, on a pot of boiling water, until it is scalding hot, but not made to boil. Carefully carry it back to the dairy or milk room, and let it stand 10 or 12 hours longer, skim it, and you will have cream equal to any in Cornwall. This process is generally used in Devonshire, in dairies of 6 or 8 cows, and the cream finds a ready market in London, at the same price as butter.

Snow-ball Cake.—Contributed to the *Agriculturist* by Mrs. A. W. Newell: 1 cup of white sugar, $\frac{1}{2}$ cup of butter, the whites of 5 eggs, 1 teaspoonful of soda, and a little nutmeg; add flour enough to make a stiff batter; bake in patty tins.

Sponge Cake.—Contributed to the *Agriculturist* by a subscriber: Equal weights of eggs and sugar (pulverized,) half weight of flour; beat the yolks and whites separately (very light;) mix the sugar and yolks first, then add one grated lemon and beat for 15 minutes, then add the whites and mix well; lastly stir in the flour and mix gently.

Home-made Candy.—Contributed to the *Agriculturist* by Mrs. I. S. Kaler: To one cup sugar (New-Orleans is best), add one cup cider vinegar. If the vinegar be very sour, put in one-third water. Boil 15 to 20 minutes, then work till white. This is very nice, and when thus made at home you know that it contains no poisonous substance.

To Remove Rust Stains.—Mary A. Alter, Jasper Co., Ind., writes to the *American Agriculturist* that stains of iron rust may be removed from linen or cotton thus: Wash the cloth through one suds, and rinse. While wet, rub ripe tomato juice on the spots. Expose it to hot sunshine until nearly dry, and wash in another suds.

BOYS & GIRLS' COLUMNS.

A Talk about the Snow.

The snow that now whitens the fields looks like a great blank page, but if observed attentively, it will furnish many most interesting lessons. What makes it white? It has nothing mixed with it to give it so dazzling an appearance. When melted, it yields only pure and almost transparent water. If you carefully look at one of the small particles which make up a snow flake, it will be found as clear as glass. You know a sheet or block of ice looks much like glass, and that snow is composed of small bits of ice thrown loosely together. If we scrape shavings from a block of ice, they will be white like snow; if ice be pounded fine it will also show whiteness, and clear glass broken very fine presents the same appearance. Then this whiteness must in some way be caused by the fineness of the ice particles composing the snow-flake. Let us see if it can be explained. Light from the sun is white. When a beam of light strikes upon an object, part of it is thrown off again, or reflected as it is termed. The rest of it passes through the object if the substance be transparent, or is taken into it (absorbed) if the matter be opaque. Striking upon smooth polished ice, some of the light passes through, but much of it is reflected, as shown in fig. 1, where L, represents the direction of the ray falling upon the ice, and E, the course it takes when passing off. You observe that the angles or corners made by these two lines with the ice, are just alike; so that to perceive the beam of reflected light the eye must be in the line E. If the eye were in the dotted line, C, the direct ray from the sun or other light would not be perceived. Children sometimes amuse themselves with a bit of glass

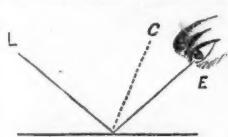


Fig. 1.—ANGLE OF REFLECTION.

This directly reflected light when coming from the sun, combines all colors and appears white. Now suppose that a multitude of small bits of ice, polished on every side, were thrown together promiscuously, the sunlight striking on the mass would be reflected in every direction. If there were enough of them, the eye looking at them from any point would receive many of the directly reflected rays, and the ice would look white. And this is just what occurs with the snow. It is made up of innumerable minute polished crystals of ice, as you can easily see by inspecting a newly fallen flake. The surfaces are turned in every direction, and each side or face of the crystal sends out its little beam of light; these enter the eye and the whole surface of the snow looks brilliantly white. The clear, perfect crystals will not, however, be found during every fall of snow. Certain conditions of atmosphere are necessary for their appearance.

These snow crystals are very beautiful. They are of very many different forms, though all are made on the same general plan. Scoresby, a celebrated Arctic Navigator, observed six hundred variations. Several varieties

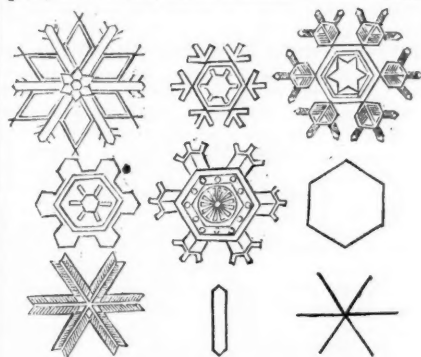


Fig. 2.—VARIOUS FORMS OF SNOW CRYSTALS.

may be detected with the eye alone, but they can be seen to the best advantage with a good microscope. To observe them, choose a time when snow is falling through a still atmosphere, not warm enough to melt them. Catch a flake gently upon some cold surface, and in looking at it, be careful not to breathe upon it, as very slight warmth will destroy the structure. Fig. 2, shows some of the enlarged forms as viewed through a strong microscope.

Many more very pleasing and instructive topics are suggested by snow, as for example, how it is formed; what benefits come from its being white, and from its being so loosely thrown together; why it is always found

on high mountains, even in the hottest countries; what becomes of it in such situations, where it frequently falls but never melts, etc. We must leave these, for the present, for you to think of, and read about in books treating these subjects more fully than we have space for.

As Good as a Puzzle.

A schoolmaster is much needed in the neighborhood where the following handbill was posted up. The "Educator" from which we copy, vouches for its authenticity:

"bup Lick Sale for Land

Cun taining 140 Acres of Land that Land Lacc in Cumber Land County in Dickensan township that Land Lacc between Wits town and hullely furnace near at gates burger roat that Land Chins Jacob rich Wins Land that Land Lacc ner at Myers Saw Mill good Wortur on that Land good Matto on that Land 25 Acres of good Matto Crown on that Land good orget on that Land good Simmer Apels and good Vinter Apels on that Land good Cheres and good biches on that Land good Saw Mill Seet on that Land 3 houses on that Land one Cuchen Stove to Sale oxens to sale."

New Puzzles to be Answered.

No. 66. *Mathematical Problem.*—Divide the number 45 into 4 such parts, that if 2 be added to the first part, 2 subtracted from the second part, the third part be multiplied by 2, and the fourth part divided by 2, the sum of the addition, the remainder of the subtraction, the product of the multiplication, and the quotient of the division will all be equal.

J'ai vis à vis du Roi

No. 67. *Illustrated French Rebus.* The above is intended for those of our young readers who may have some acquaintance with the French language.

No. 68. *A Curious Word.*—What word of four syllables includes nine shorter words, which can be made without transposing any letters?

No. 69. *Mathematical Problem.*—A rich man gave to his oldest daughter a square plot of land, and a circular piece to his youngest. Each plot was worth \$40 per acre. Reckoning a silver dollar to be $1\frac{1}{2}$ inches in diameter, the number of dollars required to surround each would just pay for it. Which daughter received the best portion, and how much was it worth more than her sister's?



No. 70. *Illustrated Rebus.* Specially for the unmarried.

No. 71. *Genealogical Puzzle.*—Contributed to the *Agriculturist* by Mildred Luther, Broome Co., Iowa: In a certain company were present a grandfather, grandmother, two fathers, two mothers, two brothers, two sisters, two husbands, two wives, two uncles, an aunt, two sons, a daughter, two cousins, a nephew, a niece, and a grandson; and yet the whole company consisted of but five persons. How could this be?

Answers to Problems and Puzzles.

The following is the solution to the *Illustrated Rebus*, No. 65, January No., page 23. "Man y a man turning a little pall before the cannon's mouth eye snow cow ard," or, "Many a man turning a little pale before the cannon's mouth, is no coward." As we go to press earlier than formerly, we defer giving the solutions to the mathematical problems until next month, in order to give more time for sending in answers. The following have sent in correct answers up to the date of Jan. 8th. The numbers indicate the problems, etc., answered by each: Edwin Hill 59; Henry Martin Kellogg, 55; George F. Butterworth, 55; M. F. Moore, 61.

A CARELESS PRINTER.—The lady principal of a school, in her advertisement mentioned her female assistant, and the "reputation for teaching which she bears," but the printer—a careless fellow—left out the "which," so the advertisement went forth, commending the lady's "reputation for teaching she bears."

How can the trees put on a new dress without opening their trunks? They leave out their Summer clothing.



"HAPPY LITTLE CHICKS."—Engraved for the American Agriculturist.

Who wants to be Rich?

Does the young reader sometimes say, "I wish I was rich?" Look at the above beautiful picture, and see how easy it is to be "richer than a king." How much is that baby worth to its brother and sister? No money could buy it of them. They would make a poor bargain in selling it for gold. Its smiles are brighter than dollars, its little laugh makes sweeter music than the clink of money, and its love brings more real pleasure than wealth can purchase. These "little chicks" are healthy, innocent, loving, and therefore happy; what could riches do more for them? The artist has added much to the beauty of the sketch by introducing the hen and her brood that come fearlessly to pick up the stray crumbs. It shows that these creatures have confidence in the kindness of the children. Good qualities, like grapes, are likely to grow in clusters. If the whole story of the picture could be known, no doubt we should find these children obedient, industrious, and the source of much comfort to their parents. How many such families does the *American Agriculturist* visit? Let your home be No. 1. on the list.

A Singular Tradition.

Among the Seminole Indians there is a singular tradition regarding the white man's origin and superiority. They say that when the Great Spirit made the earth, he also made three men, all of whom were fair complexioned; and that after making them, he led them to the margin of a small lake, and bade them leap in and wash. One obeyed, and came out of the water purer and fairer than before; the second hesitated a moment, during which time the water, agitated by the first, had become muddied, and when he bathed he came up copper-colored; the third did not leap until the water became black with mud, and he came out with his own color. Then the Great Spirit laid before them three packages, and out of pity for his misfortune in color, gave the black man the first choice. He took hold of each of the pack-

ages, and having felt the weight, chose the heaviest; the copper-colored man then chose the next heaviest, leaving the white man the lightest. When the packages were opened, the first was found to contain spades, hoes, and all the implements of labor; the second enwrapped hunting, fishing, and warlike apparatus; the third gave the white man pens, ink, and paper—the engines of the mind and the real foundation of the white man's superiority.

Rosa Bonheur and her Pictures.

Many of you have probably seen an engraving of the picture called "The Horse Fair" painted by a French lady, Rosa Bonheur. Her history is interesting, as showing what industry and plucky determination will do. Her father was a poor drawing-master in Paris, and apprenticed Rosa at the age of twelve to learn dressmaking; but her health failed and she left a business she did not like. She soon commenced to make models of animals, and copy her father's paintings, hoping some day to be able to support herself. She worked hard day after day, until her father noticed her wonderful progress, and gave her a course of instruction. He then sent her to the Louvre, the finest picture gallery in Paris, to copy from the best paintings. Here she used to work from morning until night. Soon her pictures began to sell for a small sum, which increased her diligence. She was then but sixteen years old. Having resolved to devote herself to painting animals, and being too poor to buy models, she used to take a bit of bread in her pocket, walk out into the country, and copy from nature. She would also visit the cattle pens in the city where animals were kept previous to being slaughtered. This was not a pleasant place for a young lady, but she was too much in earnest to be stopped by trifles. Her reward soon came. When nineteen years old, she received several prizes for her pictures exhibited in Paris, and at last took the gold medal for the best painting. At thirty-two, she finished the "Horse Fair," which brought her \$8000, and from that time her fortune was made. She is now very wealthy,

and the best animal-painter in Europe. Remember the secret of her success: *She loved her work and stuck to it.*

Lord Melville and his Pet Ram.

Lord Melville, of Scotland, had a large pet ram called "Bill," which used to follow him like a dog. One day he carelessly left the front door open, and Bill stepped in, and passed along into the drawing-room, where was a very beautiful glass mirror bought of a Spanish nobleman, for nearly a thousand dollars. No sooner did Bill see his image, than he gave a challenge to fight, by stamping, and "getting into his position," which, of course, was answered by the image, and Bill dashed with all force against the glass, shivering it to atoms. A few years after, when the animal was slaughtered, a spoon and a handsome silver-mounted snuff-box were made of his horns, and Lord Melville gave these articles to his friend William Pitt, Prime Minister of England. Subsequently, Mr. Pitt, in writing to the Spanish Nobleman who formerly owned the mirror, mentioned to him the story of the ram. The Spaniard read the letter to the King, who was so much amused by the incident, that he sent Lord Melville a splendid mirror from his own palace. In return, Mr. Pitt presented the King with the snuff box made of Bill's horn, and we suppose it is now in the Palace at Madrid.

A Little Farming Talk.

When in his talks with the boys the Editor calls one by name, the rest may all think he means them too, if what he says is applicable to their cases. This time we want to have a talk with Tommy. Many tolerably good farmers near where you live are careless of their manure; they throw it out of the stable doors and windows and scatter it about the yard now and then, or they leave it in a heap against the barn, so that it rots the boarding, or it heats and fire-fangs, showing white mold all through the heap. Then, again, these farmers draw out the manure upon the land every now and then, and either leave it in small heaps for months or weeks; or perhaps the fields never see it, but it goes upon the garden and is spread about in the autumn to lie until spring before it is plowed in. Where manure is thus carelessly treated, the cattle usually are not stabled so as to save all their manure. Tommy, we want you to think this all over, and when you do your stable work, for probably you have to lend a hand at any rate in cleaning out the stable, as well as at milking and feeding, think how quickly horse manure ferments and decays. If it is not well cleaned out of the stable, it will soon give off ammonia and other offensive gases, which are very injurious to the horses' lungs, and to the eyes also. You do not want to do any thing which will give Dobbin a cough or injure his eyesight, for of all things which make a horse valuable none are more important than lungs and eyes. The stables therefore ought to be cleaned out every day.

Now what will you do with the heap that grows so fast in size by every day's additions? Is it good for anything? Of course it is.—Then save it so as to make it most valuable. "Half a loaf is better than no bread" to be sure, but if you will only save it you may have the whole. Don't let the manure lie long in the heap as it is thrown out, but if it must be kept unsheltered, spread it evenly in an oblong pile of convenient size, and spread each day's manure so that it will lie two or three inches thick, and then cover it with a thin layer of earth; dry muck from the swamp is better. When manure lies long in a heap it heats, and when it heats long it "burns," and this is a great damage. If it is packed very closely, by being trodden down by men or animals, it ferments slowly; when it is mixed with soil or muck, more slowly still. After it has begun to heat a little, and before the fermentation has progressed hurtfully, it is best to work it all over, mixing it thoroughly, breaking up the cakes and lumps, and bunches of straw, and making another compact pile, which will in turn need to be watched and worked over again, if it lies very long. We want our young friends to grow up first rate farmers, and one of the first and most important lessons to be learned is to take care of manure.

KISSING A SUNBEAM.—A babe, not old enough to speak or walk, was creeping on the floor. By and by a bright ray of sunshine fell upon the carpet. Baby saw it, and crept toward it, and all around it, with the greatest interest in her sweet face, and then putting down her little lips she kissed it.—Now was not that beautiful? The bright little sunbeam lighted up joy in her baby heart, and she expressed that joy with a sweet kiss.

THE WITTY SHERIDAN. while visiting at a country house, was asked to take a walk by a rather undesirable lady companion, but excused himself on account of the bad weather. She soon after caught him attempting to escape without her. "Well," she said, "I see it has cleared up." "Why, yes," he answered, "it has cleared up enough for one, but not enough for two!" This was too plain to be misunderstood and Sheridan was relieved of her troublesome attentions forever thereafter.

Business Notices, 90 Cents per Line of Space.

Special Notice about "Washing Day"

The proprietors of the **Nonpareil washing Machine** take pleasure in making known that they have effected an **improvement** in the Machine, by which the labor formerly required to work it is lessened about **ONE-HALF**.

The Nonpareil is now in use, more or less extensively, in all the loyal states. It has during the three years of its existence steadily advanced in public favor, and entirely by the force of its superior merit; for the proprietors have carefully abstained from puffing it into notice. A practical eye will readily perceive that the Nonpareil is constructed on strictly mechanical principles; and that in the crank and balance wheel are secured the only means by which **speed and power** can be obtained with comparatively little labor. When to these advantages are added the strength of material and careful workmanship which enter into the construction of the Nonpareil, the manufacturers believe they present a Washing Machine that will be found in every respect satisfactory to the purchaser. See advertisement and illustration on another page.

TO FARMERS.—Letters from those who were induced by advertisements in the *Agriculturist* to buy **Doty's N. Y. Clothes Washer**, evince high satisfaction with it. The price is still kept down to \$10, notwithstanding the constant rise in materials, etc., and some valuable improvements. Rights of towns distant from the New York and Janesville manufactories are now offered for sale. **Wm. M. Doty, 498 Broadway. P. S.—I shall remove to 42 Park Row, on Feb. 1st.**

THE CRAIG MICROSCOPE.

And mounted objects combine instruction with amusement, the useful with the entertaining. This Microscope, in brass, is mailed, postage paid, for \$2 25; or with six beautiful mounted objects for \$3; or with 24 objects for \$5. In hard rubber, for 50 cents, in addition to above prices. Address, **HENRY CRAIG, 335 Broadway, New-York.**

THE BELLEVUE,

Or perfected **STEREOSCOPE**, having a sliding focus and field-piece, accommodating all eyes, is mailed, pre-paid, for \$2.40; or with 12 assorted views for \$5; by **HENRY CRAIG, 335 Broadway, New York.**

DECISION

OF THE

COMMISSIONER OF INTERNAL REVENUE.

[OFFICIAL.]

TREASURY DEPARTMENT.

Office of Internal Revenue,
WASHINGTON, January 7, 1864.

Sir:—Your letter of the 4th inst. has been received, enclosing the Labels of the following-named articles: **SALERATUS, BAKING SODA, CREAM TARTAR, O. K. SOAP, YEAST POWDER, BLUING POWDER, LIQUID BLUING, BOOT BLACKING, STOVE POLISH and WRITING INK.**

In reply, I have to say that there is nothing contained in either of those labels which would render the articles sold under them subject to the stamp duty.

Very respectfully,

JOSEPH J. LEWIS,

Commissioner.

JAMES PYLE, Esq.,
350 Washington Street, New-York.

CITY AND COUNTY OF NEW-YORK, ss:

On the 9th day of January, 1864, before me personally came **JAMES PYLE, No. 350 Washington Street**, who being duly sworn, doth testify that the above communication was received by him from the Commissioner of Internal Revenue.

JAMES M. TUTHILL,
Assistant Assessor Eight Division, Fourth District,
State of New-York.

Lands—To All Wanting Farms.

Large and thriving settlement of Vineland, mild climate, 30 miles south of Philadelphia, by railroad; rich soil; fine crops; twenty-acre tracts, at from \$15 to \$20 per acre; payable within four years. Good business openings; good society. Hundreds are settling and making improvements. Apply to **CHAS. K. LANDIS**, Postmaster, Vineland, Cumberland County, N. J. Letters answered. Papers containing full information sent free.

L. C. HOOTEE & CO., Dealers in Patents.—We constantly hear of large fortunes being made by Dealers.

WANTED A SITUATION by a *thorough-going* enterprising American man, to take charge of a first class Farm. Address **H. W. MARSELLUS, Amsterdam, N. Y.**



Fort Edward Institute.

\$43 for Spring term, or, \$128 per year for Board, room furnished, (except carpet,) fuel, and washing, with Tuition in the common English branches.

For Ladies, carpets and extra furniture are provided for \$3 per term extra, or a total charge of \$134 per year.

Situation on the bank of the Hudson River, in the flourishing village of Fort Edward, Washington Co., N. Y., accessible by Saratoga and Whitehall R. R.—distant 17 miles from Saratoga Springs. There are four church services in the village—Methodist, Presbyterian, Baptist and Episcopalian.

For nine years the best sustained Boarding Seminary in the State, the following are some of the claims of this Institute:

I.—Its extensive, substantial, and commodious brick buildings, the sizeable and convenient rooms for students, and the admirable arrangements for the two separate departments.

II.—Its full and competent Faculty, in the various departments of study, both solid and ornamental, and the corresponding **extensive programme of studies provided every Term**, from which the student may select—constituting the Institute, in a practical and very important sense, a real **PEOPLE'S COLLEGE**. Thus: 1. At this Institute a good class is **always** preparing for Union or Yale College, or for the Wesleyan University. 2. Here all the approved appliances of the best modern Commercial College are in successful use, and a large class graduates each term. 3. There is provided here a **superior course of LIBERAL STUDIES**, classical, scientific and ornamental; and a choice **ECLECTIC COURSE** for proficient in Painting and Music. These courses attract constantly, and from a wide district, young ladies of the best capacities. As a **LADIES' COLLEGE** this Institute is believed to be unsurpassed either as to its facilities, or the number, character, or the culture of its graduates, by the most expensive or most pretentious Exclusive Female Colleges. From these liberal courses, young men are not excluded, hence very many choose Fort Edward Institute as the best available place of fitting for the duties of business and professional life. Not a few are attracted by the rare facilities the Institute affords for culture in original composition and oratory. To the advantages offered by four permanent Literary Societies, and the constant stimulus of good and critical audiences, is added each term the judicious award of valuable prizes.

III.—An important feature of the Institute is its outspoken **religious character**. The Principal—a Methodist Clergyman—stands pledged to the Christian Public, in addition to the daily Chapel service in which the religious element in all is recognized and appealed to, that the approved means of grace will be systematically employed to bring to Christ such irreligious students as can be induced voluntarily to attend upon them. A proscriptive or a proselyting sectarianism is neither practised nor permitted. Students representing the various evangelical communions are made to feel that they are thoroughly equal in all the privileges of the Institute, and are distinctly advised in their choice of a place of Sabbath worship—so far as practicable—to respect the denominational preference of their family.

IV.—The average maturity of its students, and the broad **National character** of its patronage, a majority of the loyal States, and the Canadas, being represented every year on its register.

V.—The unity of its administration, the governmental and financial head of the establishment having been unchanged from the opening, the accumulated facilities and experience of a series of years are thus made available to the present patrons of the Institute.

VI.—The remarkably low charges for Board and Tuition, in comparison with quality of the advantages afforded, and with other respectable Boarding Seminaries.

The Spring Term begins March 24th, and ends June 23d. Good students admitted at any time, and charged proportionally to close of term.

For Catalogues or for rooms apply to
REV. JOSEPH E. KING, D.D.
Fort Edward, N. Y.

THE SUNDAY SCHOOL TIMES,

PUBLISHED WEEKLY.—ONE DOLLAR A YEAR.
The cheapest religious weekly paper published; an influential organ of the Sabbath-School cause, and emphatically a Sunday-School Teacher's Paper, and a most interesting and valuable Family Paper. A specimen copy will be sent on receipt of a stamp to pay postage.

J. C. GARRIGUES & Co., Philadelphia, Pa.

Advertisements.

Advertisements to be sure of insertion must be received **BEFORE the 15th of the preceding month.**

TERMS—(Invariably cash before insertion):

FOR THE ENGLISH EDITION ONLY. (14 lines in an inch)

Sixty cents per line of space for each insertion.

Business Notices 90 cents per line.

One whole column (14 lines), or more, \$75 per column.

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Prairie View Farm For Sale.

For sale, a beautiful farm of 100 acres, situated near the Fox River in the town of Oswego, Kendall Co., Illinois, 3½ miles from the station on the Chicago, Burlington and Quincy R. R., 2½ from the village of Oswego, and 6 from the city of Oswego and 6 from the city of Aurora. The improvements are all permanent and particularly well adapted to stock purposes. A well furnished house, and large barn with stabling for 50 cattle. A thrifty Apple orchard, Peach, Plum, Pear and Cherry trees, both dwarf and standard; also all the small fruits with a good variety of grapes, most of the above in bearing. A fine Durham stock, horses, tools and household furniture will be sold with the farm if desired. For further particulars address the subscriber at Oswego.

F. PORTER WIGGINS.

MARYLAND FARMS.

We have for sale over 200 farms in this State, of as beautiful and productive land as ever the sun shone upon, having access by Rail Roads, Steamboats and Turnpikes. These Farms in many instances can be bought for less than the improvements upon them cost, in consequence of the change from slave to free labor.

As Surveyors we have an intimate knowledge of the lands of this State. Enquiries by letter will be promptly answered.

R. W. TEMPLEMAN & CO.,
Real Estate Brokers, Baltimore City, Md.

TWO moderate sized and exceedingly tasty Residences for sale, beautifully located, convenient to station at Maplewood, New-Jersey, about 16 miles from the city. Price low, terms easy. **JOHN W. SHEDDEN, Druggist,**
Bowery, cor. 4th-st., New-York.

WANTED.—With or without capital, a young man to take an interest in an old established Nursery. For particulars apply to
DAVID J. GRISCOM, Woodbury, N. J.

THOROUGH Bred Ayrshire Cows and Bulls for sale by **A. M. TREDWELL, Madison, Morris Co., N. J.**

FOR SALE.—Two pure bred choice Jersey Bulls. One twenty months, the other ten months old. Address **W. STANLEY, No. 16 Wall-st., New-York,** or **E. COUCH, Great Barrington, Mass.**

PREMIUM Chester White Pigs.—Progeny of Hogs that have taken State and United States Premiums, sent in pairs (not akin) by express, to all parts of the Union. Price \$8 to \$20 per pair. Address **N. P. BOYER & CO., Coatesville, Chester Co., Penn.**

To Poultry and Stock Fanciers.—A few choice specimens of full-bred birds of following varieties for sale. White Faced Black Spanish, Gray Dorkings, White Dorkings, Game fowls, all of the best varieties, some from Imported Stock. Also English Lop Eared Rabbits, Chester Co. Pigs, and Cottswold Sheep of superior breeding Stock. Orders booked for stock purchases with me will receive prompt attention, and the best selections made.
S. J. BESTOR, Hartford, Conn.

Brahma Pootra Cocks.

40 Last Spring birds, very fine, pure stock. They make an excellent cross on ordinary stock, greatly enlarging the size, making good market fowls, and excellent Winter layers. Weight of cock full grown, 10 pounds. Hen 7 pounds. Eggs, 7 to the pound. Price, \$2 50 each, boxed and delivered at Express offices in N. Y. City. **J. C. THOMPSON,**
Tompkinsville, Staten Island, N. Y.

NOTICE.—THE 6th ANNUAL MEETING of the ASSOCIATION OF BREEDERS OF THOROUGH-BRED NEAT STOCK, will be held at the City Hall, Worcester, Mass., Wednesday, March 2d, at 10 A. M. A full attendance of members and others, interested in the objects of the society is expected. **HENRY A. DYER, Sec'y,**
Hartford, Conn.

HYDROMETERS.

Does your milkman water your milk, and how much? Do some of your cows give richer milk than the standard for pure milk? How much difference does different feed make in its quality? The **HYDROMETER** will tell. Sent neatly encased, post-paid, upon receipt of 50 cents.
Address **HYDROMETER CO.,**
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Artificial Legs and Arms.

SELPHO'S PATENT, Established 24 years. The best substitutes for lost limbs ever invented. Can be had only of **Wm. Selpho & Son, Patentees, 516 Broadway, N. Y.** N. B.—Silver Medal awarded at late Fair of the American Institute, and New-Haven County, for best Artificial Limbs.

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For the sale of useful Patents. Responsible County and **TRAVELLING AGENTS WANTED.** Commissions 25 per cent.—All are invited to enclose stamp for our Circular issued monthly, in book form free, containing Terms, Notices of the Press, and full particulars. Reference, **Hon. Peter G. Washington, New-York,**
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SUPERHEATED STEAM will dry **GREEN LUMBER** beautifully, in four days, for fifty cents per M.; and Grain, Flour, Meal, Salt, White-Lead, Tobacco, Wool, Paper, Bricks, Clothes, Fruit, Vegetables, &c., as cheaply. Circulars free. **H. G. BULKLEY, Cleveland, Ohio.**

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**Articles of Merchandise,
Implements for the Farm,
Garden and Household,
SEEDS, &c.**

Special attention will also be given to procuring Sewing Machines; Pianos and other Musical Instruments; Philosophical and Astronomical Apparatus; Books for Schools and Colleges, and School Furniture.

**NO CHARGE MADE TO PURCHASERS,
BEYOND THE
Lowest Regular Price.**

ORNAMENTAL TREES AND SHRUBS,
Suitable for Lawns and Gardens.

FRUIT TREES.

The best quality of Standard and Dwarf Pears—Apples—Cherries and Plums, etc.

STRAWBERRIES.

All the best Varieties.

GRAPE VINES,

Delaware, Concord, Iona, and other choice Grape Vines.

CASTOR POMACE.

\$22 per ton.—\$3 per bag.—Cheapest Ammoniate Fertilizer. Send for Circular.

Universal Clothes Wringer.

No. 1. LARGE FAMILY WRINGER.....	\$10.00
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THE NONPAREIL WASHING MACHINE.

Prices, No. 1, \$12; No. 2, \$16; No. 3, \$20.

DOTY'S CLOTHES WASHER, Price \$10.

THE AQUARIUS, A Hand Force Pump. Price \$10.

WOODRUFF'S PATENT PORTABLE BAROMETER. Safe delivery warranted.

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Bankers, No. 44 WALL Street,
WILL CONTINUE TO FURNISH

U. S. FIVE-TWENTY BONDS

as long as issued by Government at Par and Interest.
TO BANKS AND BANKERS the usual Commission allowed.

We also buy and sell at market rates:

U. S. One Year CERTIFICATES of INDEBTEDNESS.

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All kinds of Government and other Securities. Orders from the Country for purchase of Government Bonds, etc., attended to WITH CARE and Promptness.

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260, 261 & 262 West Washington Market,
FOOT OF FULTON-ST.

Particular attention paid to selling all kinds of Fruit and other Farm Produce.
Refers to the Editor of the American Agriculturist.

Sheppard, Seward & Co.,

Wholesale Dealers in

AMERICAN & FOREIGN SEEDS.

214 Pearl-Street, New-York.

Catalogues on application.

[From JOSIAH CARPENTER—32 Jay-Street, N. Y.]

A CARD.

NEW-YORK, January 13, 1864.

To the Editor of the American Agriculturist.

FRIEND JUDD: I received your letter of yesterday, making inquiries concerning me, in behalf of two of my customers. As you state that you have very frequent letters of inquiry concerning my business, responsibility, etc., I embrace the present opportunity to give you an insight into my business, in order that you may be prepared to answer your readers satisfactorily in the future.

Two years ago I was first led to make my business more widely known, by your statement that "A GOOD, RELIABLE ESTABLISHMENT WAS NEEDED IN NEW-YORK CITY, WHERE FARMERS COULD SEND THEIR VARIOUS KINDS OF PRODUCE WITH PERFECT CONFIDENCE, TO BE WELL CARED FOR, WELL SOLD, AND PROMPT RETURNS MADE, AT A SMALL COMMISSION."

Such a business I had been, and have been trying to do, and, I am happy to say that the numerous testimonials of kind approval and satisfaction, from hundreds of my patrons who have never left me since they first were induced to entrust their produce to my care, gives me every assurance that success will continue to attend my efforts. These letters of satisfaction can be seen at my Principal Office, 32 Jay Street, (I say "Principal Office" because two other warehouses are required. Besides these, I have a Stand in the Wholesale Washington Market of this city, which gives me additional facilities for disposing of the produce consigned to me to the best advantage). Of my capital, and responsibility, you have, or can have abundant testimony, any moment.

My oldest shippers are the largest ones. Many having sent in small consignments have been so well pleased that they have induced others to send to me. I will mention one case in point. This day I received a four thousand dollar consignment from a party that was induced to send by one that had sent me a small shipment of produce in the winter of '62. I have never seen either of the gentlemen, but it is an old and true saying "actions speak louder than words."

During the last twelve months I have received and sold produce of every description from NINETEEN HUNDRED AND FIFTY FOUR (1854) DIFFERENT PERSONS, AND OUT OF ALL THESE I HAVE HEARD OF BARELY SEVEN (7), COMPLAINTS. I have advertised in your paper the *American Agriculturist*, for two years, and the first patron I had in consequence, is a patron of mine still. He has sent me over \$13,000 worth of produce, and always expresses his satisfaction in the proceeds of my sales. In the time that I have advertised in your paper, I have had at least two thousand letters from parties that said "I HAVE SEEN YOUR ADVERTISEMENT IN THE *American Agriculturist*," and no doubt many others that have written to me and are now shipping to me, formed their first acquaintance in the same manner. It would always be a pleasure and satisfaction to me if persons would specify where they saw my advertisement.

ABOUT COMPLAINTS.—In so large a business as mine, it would be passing strange if there were not some complaints. There are many disadvantages that I am obliged to contend with. Many ship produce in good order, but not put up strongly or carefully enough to resist the usage of transportation, and their goods arrive injured and in poor condition, and the person shipping is disappointed in not obtaining the highest market price for a damaged article. Then again, farmers inquire or maybe read in some weekly paper that a FIRST CLASS article of produce brings a certain price, and supposing they have a choice article of the kind, because they never saw any better, they ship it to a Commission House with the full expectation of realizing the top of the market, and if the party the goods are sent to does not obtain that for his produce, he is charged with swindling or giving away the goods. He will go to the editor of the paper he saw the advertisement in, and not at all unlikely blame him because his inferior grade of produce did not bring the highest quotations. I am glad to say that these cases have not been very frequent, but they do sometimes occur. I will state a case in point: A person wrote to me for the highest price that quinces were selling for. I answered, that fine, large quinces were bringing \$5 per hundred. He shipped me a number of barrels immediately, and such quinces as most of them were, I never before saw—many of them no larger than eggs, hard and knotted, and worthless. When I first saw them, I thought they would not sell, but with extra exertion I sold all but one barrel—that was thrown away. One purchaser of seven barrels had them still on hand, the last time I saw him, and although he bought them with eyes open, and with no false representation from me, he accused me of, to use a common phrase, "sticking him on them quinces."

Transportation Companies, like other "Corporations," "seldom have any souls," and the farmer is promised that if he will ship his produce a certain day, that it will arrive in market, or to the place consigned, on a certain day, and I often have letters complaining of neglect, before the produce reaches the City.

My business has been eminently successful, which I attribute to judicious advertising in good papers, and to strict personal attention to my business, and the employment of careful, skillful, reliable business help, all of which will be continued.

Your Obedient Servant,

JOSIAH CARPENTER.

*To save your time and trouble, in answering letters, if proper you will please insert this letter in your advertising columns, and send bill to me.

J. C.

NEW FLOWER SEEDS.

**J. M. THORBURN & Co's.,
ANNUAL DESCRIPTIVE**

**CATALOGUE of
Flower Seeds and French Hybrid Gladiolus
for 1864,**

has just been published, and will be mailed to applicants free of postage.

Send also for our CATALOGUES of

Vegetable and Agricultural Seeds.

TRADE LISTS for Dealers on application to

J. M. THORBURN & Co.,

15 John Street, New-York.

Early Vegetable Seeds for Hot Beds.

The following seeds, the best for early sowing in Hot-Beds, will be mailed post-paid, to any address in the Union upon receipt of the price affixed.

Cabbage, Early York, and Large York.....	15 cts.
Cauliflower, Early Paris, the best known.....	\$1.25
Cucumber, Extra Early Russian and White Spine.....	20 "
Egg Plant, Improved Large Purple.....	50 "
Lettuce, Early Silesian, and Boston Curled.....	20 "
Radish, Early Scarlet and Olive Shaped.....	10 "
Tomato, Extra Early Red and Early Apple.....	20 "

per packet.

" Lester's perfected, extra fine..... 10 "

" New Erect French, grows in the form of a bush, fine flavored, very ornamental..... 10 "

English and German Prize Cucumbers, in great variety, fine for forcing..... 25 "

A descriptive Catalogue of Vegetable and Flower Seeds, furnished to all applicants upon receipt of a 3-cent stamp.

Address **B. K. BLISS,** Springfield, Mass.

VICK'S ILLUSTRATED CATALOGUE OF SEEDS

AND

Guide to the Flower Garden for 1864.

My NEW CATALOGUE AND FLORAL GUIDE is now published and ready to send out. It contains accurate descriptions of the leading Floral Treasures of the world, with full and plain directions for SOWING SEED, TRANSPLANTING and GENERAL CULTURE. Also a list of Choice Seeds for the **VEGETABLE GARDEN**, with necessary instructions for PLANTING and CULTURE.

My NEW CATALOGUE and FLORAL GUIDE is a beautiful work of FIFTY large pages, illustrated with TWENTY-FIVE fine engravings and one splendid COLORED PLATE of the DOUBLE ZINNIA. It will be sent, postage paid, to all who apply inclosing ten cents.

Address **JAMES VICK, Rochester, N. Y.**

RUSSIA OR BASS MATS, SELECTED EX-

pressly for budding and tying; GUNNY BAGS, TWINES, HAY ROPES, &c., suitable for Nursery purposes, for sale in lots to suit, by

D. W. MANWARING, Importer, 248 Front-st., New-York.

BULBS.

Catalogue of BULBS including a choice assortment of HYBRID GLADIOLUS, JAPAN LILIES, &c., &c., now ready and mailed free to all applicants.

FRANCIS BRILL, Newark, New-Jersey.

Garden Seed for 1864.

HOVEY & CO.

GROWERS AND IMPORTERS OF

Vegetable & Agricultural Seeds,

Offer for sale an extensive assortment of the growth of 1863.

Our annual catalogues of SEEDS, FRUIT TREES, GREENHOUSE PLANTS, &c., will be forwarded to all applicants on the receipt of a 3-cent stamp.

Priced Flower Catalogue

of ROSES, VERBENAS, DAHLIAS, CARNATIONS, and all other bedding plants, comprising all the novelties for the coming Spring. Now ready, mailed to all applicants. Our usual liberal discount to the trade.

PETER HENDERSON, Jersey City, N. J.

CHICORY SEED.

THE GREAT SUBSTITUTE FOR COFFEE.

A supply of the genuine article just received by the Subscriber, and will be mailed post-paid to any address upon receipt of the price affixed. Packets containing 1 ounce, 15 cents, 8 ounces, 60 cents, 1 pound \$1.00.

Directions for culture accompany each package.

B. K. BLISS, Springfield, Mass.

White Japan Musk Melon.

Seed of this choice melon, a cut and description of which appeared on page 335 of the October *Agriculturist* for 1863, for sale at 25 cents per package. Trade furnished on liberal terms. Catalogues sent on receipt of stamp.

J. WESLEY JONES, Chatham 4 Corners, N. Y.

STRAWBERRY PLANTS.

Good young plants of most of the favorite varieties for sale at moderate prices. Price list and catalogue sent gratis to all applicants. **SAMUEL L. ALLEN, Cinnaminson, Burlington Co., N. J.**

STRAWBERRY PLANTS of best quality for spring planting at reduced prices. Wilson, Bartlett, Triomphe de Gand and Ward's Favorite, at wholesale and retail. Order early. New price list now ready.

E. WILLIAMS, Mont Clair, New-Jersey.

Wm. H. RANLETT, Architect.

Hohokus, Bergen County, N. J.

Rare and Beautiful Flowers.

Splendid Novelties.

B. K. BLISS, Seedsman and Florist,
Springfield, Mass.,

Would inform his friends and patrons that the supplement to the Tenth Edition of his Catalogue for 1864-1, will be issued early in February, and mailed to all applicants upon receipt of a 5-cent stamp. It will contain a list of all the Novelties of the past season both of European and home production, with many other rare and desirable seeds, well deserving the attention of all lovers of Flowers. Particular attention is invited to the following choice assortments of

French and German Flower Seeds, saved by the most successful European cultivators, containing only the most beautiful varieties in packages, in which are enclosed four, six, eight, ten or more separate papers, each containing seeds of a different color or variety of the same plant.

French and German Asters, Rose and Camellia flowered Balsams, German Tea Week, Intermediate and Brompton Stocks, Larkspur, Alpine Plants, Dianthus, Everlasting Flowers, Hollyhocks, Ipomoea, Jacobaea, Lupinus, Marvel of Peru, Nemophila, Ornamental Grasses, Ornamental Gourds, Portulaca, Petunias, Schizanthus, Pansies, Scabiosa, Tropaeolum, Wallflowers, &c., &c.

Among the improved varieties of Florists' Flowers, the quality of the following cannot be surpassed, Auricula, Cineraria, Calceolaria, Cockscomb, Carnation and Picotee Pinks, Fuchsias, Geraniums, Gladioli, Gloxinia, Mimulus, English and New Fancy Pansies, Folyantius, Petunias, Chinese Primrose, Stocks, Perfection and Auricula flowered Sweet Williams, &c., &c.

All of the seeds named in the Catalogue will be mailed post-paid to any address in the loyal States, upon receipt of the price affixed.

Those who have not a copy of the Catalogue will be supplied with both Catalogue and Supplement upon receipt of two 5-cent stamps. Address
B. K. BLISS,
Springfield, Mass.

Established in 1828.



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WARRANTED AS REPRESENTED.

GARDENERS AND PLANTERS PRICED CATALOGUE OF SEEDS, AND BUIST'S ALMANAC AND GARDEN MANUAL for 1864, mailed free to all applicants. Address

ROBERT BUIST, JR.

Seed and Agricultural Warehouse,
Nos. 922 and 924 Market-st., PHILADELPHIA.

Choice Flower Seed for 1864.

HOVEY & CO. invite the attention of lovers of beautiful plants to their collection of Flower Seeds, the most complete in the country. The highest prizes have been awarded H. & Co., by the Mass. Hort. Soc. for superior Asters, Zinnias, and other flowers. Cultivators about making a selection for 1864, should send for our DESCRIPTIVE CATALOGUE OF SEEDS, which will be forwarded to all applicants.
HOVEY & CO., 23 Kibby Street, Boston.

Flower Seeds, Delaware Grape

VINES, flowering plants, &c., in variety. Sent by mail. Catalogues gratis. Address
H. B. LUM, Sandusky, Ohio.

White and Grey Willow CUTTINGS, GENUINE AND CHEAP.

FRUIT AND ORNAMENTAL NURSERY STOCK, Wholesale and Retail.—Send red stamp for full Catalogues.
F. K. PHOENIX, Bloomington, Ill.

White Willow Hedge.

The subscribers have White Willow Cuttings of the best quality at wholesale or retail. Every farmer has more or less land on which the White Willow fence can be grown to advantage. For particulars and prices send for our circular. We also want Agents to sell Colby's Patent Clothes Wringer in every County.
COLBY BROS. & CO.,
Waterbury, Vt.

For Live Fences and Wind-Breaks. The White Willow.

Its hardness, adaptation to wet and dry soils, certainty of growth of cuttings, not sprouting from the root, healthfulness under severe pruning, vigor of growth, tenacity of life, cheapness and durability, recommend it to the consideration and use of land-owners.

Genuine and vigorous cuttings will be furnished packed in boxes and delivered at freight or Express office by the Subscriber at \$0.50 per 1000. No orders filled under the value of \$5. All my traveling agents bear Certificates of Agency, which purchasers will please call for to avoid any risk of obtaining spurious cuttings from pretending parties. Directions for planting and culture, also Circulars, furnished free on application.
E. S. PIKE, Painesville P. O., Ohio.

CUTTINGS OF THE GENUINE WHITE WILLOW, for sale at low rates in large or small quantities. Address M. ALLEN, "The Willows," Mendota, Illinois.

TO PLANTERS OF TREES, SHRUBS, AND VINES.

PARSONS & CO.,

offer their fine stock of

Apples, Plums,
Pears, Standard, Cherries,
Pears, Dwarf, Peaches,

and all other sorts of

FRUIT TREES

at very low rates.

They offer a large variety of

GRAPE VINES,

both for House and Vineyard.

DELAWARE: No. 1, very fine at \$25 per 100; \$200 per 1000.

Iowa, Hartford Prolific,
Concord, Rogers' Hybrids,
and many other sorts.

They have at **Low Figures**, a very large stock, from which to select handsome specimens, of

Street and Lawn Trees, of symmetrical form and well rooted.

Flowering Shrubs in great variety.

Roses on their own roots, and in quantity.

Exotic Plants for Window Gardens and Hanging Baskets, of the finest sorts.

They invite examination of their Grounds and Green-Houses.

For Catalogues apply by mail, at
Flushing, near New-York.

Connecticut Seed Leaf Tobacco Seed.

Be Sure and get the Best.

The Subscriber offers for sale a very clean lot of the above, raised expressly for him, by one of the most successful cultivators in the valley of the Connecticut. Packets containing one ounce, with FULL DIRECTIONS FOR CULTURE, will be mailed post-paid, to any address in the Union, upon receipt of 50 cents. Prices for larger quantities will be given upon application. Address
B. K. BLISS,
Springfield, Mass.

STAR IPOMEEA.

Seed of this beautiful flowering climber, at 50 cts. per package. Splendid colored engravings furnished to the trade. Also **ASTER SPLENDENS**, and **DATURA TEXANA**, both beautiful novelties, at 25 cts. per package for each. Catalogues of upwards of 1000 varieties of Flower seeds sent free upon receipt of stamp.

Agents wanted to sell seeds in every loyal city.
J. WESLEY JONES, Chatham 4 Corners, N. Y.

Catalogues of Seeds, Trees, Vines.

SHRUBS, STRAWBERRIES, BULBS, &c.,

mailed free to all applicants.
FRANCIS BRILL,
Nurseryman and Seed Grower,
Newark, New-Jersey.

BONE TAFEU.

Manufactured by the Lodi Manufacturing Co., from BONES, DRIED NIGHT SOIL, and guano ground fine.

The Bone is well known for its lasting effects, and the night soil and guano for their quick action, the combination producing a fertilizer EQUAL to guano, and far superior to Superphosphate or ground Bones. Farmers using it during the past two years, speak of it in the highest terms. Price \$45 per ton. Packed in bbls. of 200 lbs. each.
Address
LODI MANUFACTURING CO.,
66 Courtland-st., New-York.

TO FARMERS AND OTHERS.

We are manufacturing a Genuine Article of VERY FINE BONE DUST, and RAW BONE SUPERPHOSPHATE OF LIME, manufactured from unburned Bones, containing all the Animal and Chemical Fertilizing Properties. Please address the Manufacturers, and get the Intrinsic Value of your money.

N. B. A Liberal Discount made to Dealers for Cash.
Address
A. LISTER & BRO.,
Newark, N. J.

Bruce's Concentrated Manure.

Those who have used the above valuable fertilizer the past year, give it the preference over

No. 1 Peruvian Guano, Bone, or Poudrette. In the year 1862, some ten tons were sold. Last year orders came in to the amount of four hundred tons, only half of which could be filled. This year we shall manufacture ONE THOUSAND TONS.

Its "component" parts are:

40 per cent. of Animal fibre and Blood.

40 per cent. of pure Ground Bones.

20 per cent. of Absorbents.

The absorbents are Charcoal and Gypsum.

Price \$45 Per Ton, packed in barrels 250 lbs. in each.

Send for Circular. Send your orders to
GRIFFING BROTHER & CO.,
60 Courtland-st., New-York.

LODI POUDRETTE.



THE Lodi MANUFACTURING CO., with an experience of 24 years, again offer a uniform article of Poudrette, prepared from the night soil of the City of New-York.

The experience of thousands of customers attest to the fact that it is the **cheapest** and the **very best** fertilizer in market. It is particularly adapted for Tobacco, Corn, Potatoes, and Garden truck. A pamphlet containing directions for use, &c., may be had free by addressing a letter to the

LODI MANUFACTURING CO.,
66 Courtland-st., New-York.

CHEAP FERTILIZERS.

Agricultural Chemical Company.

Is now manufacturing and prepared to supply Farmers and Dealers with "Pabuletts," "Chemical Compost," and "Phosphate of Lime." Fertilizers, which, for value and cheapness, have never been equalled. The Co.'s pamphlet circular sent to all who wish it.

I. B. FLITS, Genl. Agt., "A. C. Co.,"
413 1/2 Arch St., Philadelphia, Pa.

PURE BONE DUST,

Guano and Poudrette.

COE'S IMPROVED SUPERPHOSPHATE OF LIME.

R. H. ALLEN & CO.,
189 & 191 Water-st., New-York.

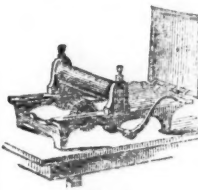
AMMONIATED PACIFIC GUANO.

A real guano, containing from seventy to eighty per cent of Phosphate of Lime, to which has been added, by a chemical process, a large percentage of Actual Ammonia so fixed that it can not evaporate, making it equal if not superior to any other fertilizer.

Pamphlets with copies of Analysis by Dr. Jackson, Mass. State Assayer, and testimonials from scientific Agriculturists showing its value can be obtained from

J. O. BAKER & CO., Selling Agents,
87 Wall-st., New-York.

Portable Printing Office.



Address

For the use of Merchants, Druggists, and all business and professional men who wish to do their own printing, neatly and cheaply. Adapted to the printing of Handbills, Bill-heads, Circulars, Labels, Cards, and small Newspapers. Full instructions accompany each office, enabling a boy ten years old to work them successfully. Circulars sent free.—Specimen sheets of Type, Cuts, &c., 6 cents.

ADAMS' PRESS CO.,
31 Park Row, New York,
and 35 Lincoln St., Boston, Mass.

HORSE POWERS, CLOVER HULLERS, CORN STALK CUTTERS & GRINDERS, HAY AND STRAW CUTTERS, VEGETABLE CUTTERS, CORN SHELLERS, SAUSAGE CUTTERS, and STUFFERS, LARD PRESSES.

Sold at lowest wholesale and retail prices, by
GRIFFING BROTHER & CO.,
60 Courtland-st., New-York.

THE ENGLISH REVERSIBLE ROOT CUTTER, Of Our Own Pattern.

HORSE POWERS, Thrashers and Separators.

FAN MILLS, CORN SHELLERS.

HAY AND STALK CUTTERS.

HAY, COTTON and LARD PRESSES.

SAUSAGE CUTTERS and STUFFERS.

R. H. ALLEN & CO.,
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INGERSOLL'S PATENT HAY PRESS.

The best in use. Sold by
GRIFFING BROTHER & CO.,
60 Courtland-st., New-York.

ICE TOOLS.

Ice Plays, Saws, Chisels, Groovers, Hooks, Hatchets, &c., for sale by

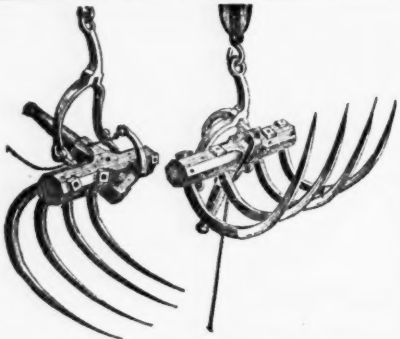
R. H. ALLEN & CO.,
189 & 191 Water St., N. Y.

Steel Composition Bells.

of the first, \$20, and those of the latter \$13. Our circulars, containing full details, will be forwarded free of charge to all parties desiring the same.

WEST'S IMPROVED PUMP.

By J. D. WEST & CO., 172 Broadway, N. Y.

**Revolution in Pitching Hay.****Rundell's First Premium Horse Pitchfork.**

First Premium at several State and County Fairs. Any number of testimonials from those that have used the Fork. Send for a circular. Agents wanted in every town and County.

R. J. RUNDALL & BROS.,
Coxsack, N. Y.
and 153 Dearborn St., Chicago, Ill.

Beardsley's Premium Hay Elevator.

Persons wishing to act as Agents for the sale of the BEST ELEVATOR in use, will please apply to
GRIFFING BROTHER & CO.,
60 Courtland-st., New-York.

AMALGAM BELLS.

Amalgam Bells.
At prices within the reach of every Church, School, Cemetery, Factory, or Farm in the land. Their use throughout the United States and Canada for the past six years has proven them to combine most valuable qualities, among which are TONE, STRENGTH, SONOROUSNESS, and DURABILITY OF VIBRATION, unequalled by any other manufacture. Sizes from 50 to 5000 lbs., costing two thirds less than other metal, or 15 cents per pound, at which price, we warrant them twelve months. Old bell metal taken in exchange, or bought for cash. Send for a Circular to the Manufacturer.

JOHN B. ROBINSON,
No. 190 William-street, New-York.

AMALGAM BELLS.

Life Insurance.**THE MANHATTAN LIFE INS. Co.**

OF NEW-YORK, No. 31 NASSAU-ST.

Accumulation \$1,500,000.
Claims paid \$30,000.
Dividends 700,000.

The greatly superior advantages of this old established Company, can be ascertained free of expense at any of the agencies, or by writing to the home office for a prospectus.
J. L. HALSEY, Asst. Sec. HENRY STOKES, President.
S. N. STEBBINS, Actuary. C. Y. WEMPLE, Secretary.

Brown's Bronchial Troches.

"I have never changed my mind respecting them from the first, excepting to think yet better of that which I began thinking well of."
Rev. HENRY WARD BEECHER.

"The Troches are a staff of life to me."
Prof. EDWARD NORTH,
Pres. Hamilton College, Clinton, N. Y.

"For Throat Troubles they are a specific."
N. P. WILLIS,
Hon. Chas. A. Phelps,
Pres. Mass. Senate.

"Contain no Opium nor anything injurious."
Dr. A. A. HAYES, Chemist, Boston.

"An elegant combination for Coughs."
Dr. G. F. BIGELOW, Boston.

"I recommend their use to Public Speakers."
Rev. E. H. CHAPIN.

"Most salutary relief in Bronchitis."
Rev. S. SEIGFRIED, Morristown, Ohio.

"Very beneficial when suffering from Colds."
Rev. S. J. P. ANDERSON, St. Louis.

"Almost instant relief in the distressing labor of breathing peculiar to Asthma."
Rev. A. C. EGLESTON, New-York.

"They have suited my case exactly, relieving my throat so that I could sing with ease."
T. DUCHAMPE,
Chorister, French Parish Church, Montreal.

As there are imitations, be sure to OBTAIN the genuine.

GREAT DIS-
COVERY!

USEFUL and VALUABLE DISCOVERY!**HILTON'S INSOLUBLE CEMENT!**

Is of more general practical utility than any invention now before the public. It has been thoroughly tested during the last two years by practical men, and pronounced by all to
Be Superior to any
Adhesive Preparation known.

Hilton's Insoluble Cement
Is a new thing, and the result of years of study; its combination is on
SCIENTIFIC PRINCIPLES,
And under no circumstances or change of temperature, will it become corrupt or emit any offensive smell.

Boot and Shoe Manufacturers, using Machines, will find it the best article known for Cementing the Channels, as it works without delay, is not affected by any change of temperature.

Jewellers will find it sufficiently adhesive for their use, as has been proved.

Families. It is especially adapted to Leather, and we claim as an especial merit, that it sticks patches and Linings to Boots and Shoes sufficiently strong without stitching.

IT IS THE ONLY
LIQUID CEMENT
Extant, that is a sure thing for mending
Furniture, Crockery, Toys, Bone, Ivory, and articles of Household use.

REMEMBER
Hilton's Insoluble Cement
Is in liquid form and as easily applied as paste.

Hilton's Insoluble Cement
Is insoluble in water or oil.
Hilton's Insoluble Cement
Adheres to oily substances.

Supplied in Family or Manufacturers' Pack-
ages from 2 ounces to 100 lbs.
HILTON BROS. & CO.,
PROVIDENCE, R. I.

**Gutta Percha Cement Roofing**

Costs less than half as much as Tin—is Fire Proof—and can be readily applied to new and old roofs by any ordinary workman.

Gutta Percha Cement Paint

Is the cheapest and most durable article for painting metals—and repairing LEAKY ROOFS of all kinds—also for pre-serving out-houses, fences, &c.—is ready prepared for use.

The
JOHNS & CROSLY, MAN'G CO.,
Sole Manufacturers,
73 William Street, New-York.

FIVE ARTICLES

FOR EVERY FAMILY.

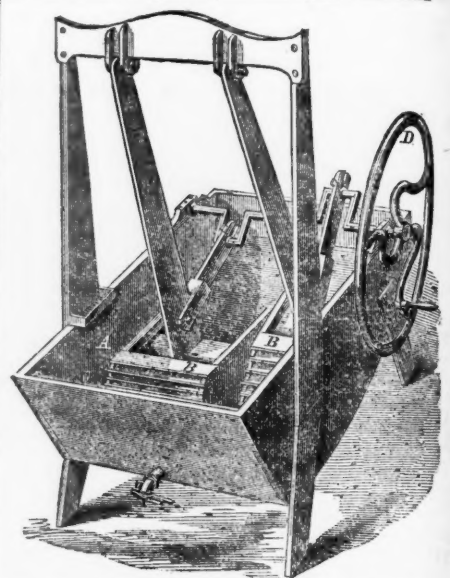
Pyle's Saleratus.**Pyle's Baking Cream Tartar.****Pyle's Purified Soda.**

These articles are put up expressly for the best class of family Trade, are strictly Pure, and full weight. A fair trial will convince any intelligent housekeeper of the Economy of their use.

Pyle's O. K. Soap.**Pyle's Blueing Powder.**

These articles are designed for the Washing Department, and have gained a reputation which bids fair to place them in every house throughout the country. For the Saving of Labor and Expense we acknowledge no rival, and simply ask one trial to prove their superiority. All the best class Grocers have, or can readily get these articles. Some, however, endeavor to persuade customers that they can supply something as good or better, for the reason that they make a larger profit; but it is the Housekeeper's right to have preference, and the Grocer's business to furnish goods bearing the best reputation. All articles bearing the name of **JAMES PYLE** can be relied upon for purity and just weight.

JAMES PYLE, Manufacturer,
850 Washington-st., cor. Franklin, New-York.

**The NONPAREIL WASHING MACHINE**

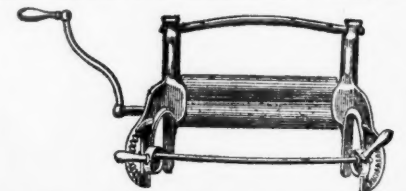
Is the only entirely reliable machine in use. It has been before the public nearly three years, and has not in any instance failed to give satisfaction.

It saves two-thirds the labor and time required in hand washing.

It is a squeezing machine, and will not injure the finest clothing.

A girl of fourteen years can operate it. It will not get out of order.

It is recommended by Mr. Judd, the proprietor of this Journal.
Prices: No. 1, \$12. No. 2, \$16. No. 3, \$20.
Send for free Circular to
OAKLEY & KEATING, 73 South-st., New-York.

**PUTNAM CLOTHES WRINGER.**

The ONLY reliable Self-Adjusting Wringer.
No wood-work to swell or split.
No thumb-screws to get out of order.

WARRANTED WITH OR WITHOUT COG-WHEELS.

It took the FIRST PREMIUM at Fifty-seven State and County Fairs in 1863, and is without an exception, the best Wringer ever made.

Instead of believing the statements of parties interested in the sale of other Wringers,

TRY IT, AND JUDGE FOR YOURSELF.

Test it THOROUGHLY with ANY and ALL others, and if not entirely satisfactory, return it.
It will wring any thing from a thread to a bed quilt without alteration.

Patented in the United States, England, Canada, and Australia. Agents wanted in every town.

Prices: No. 2, \$5 50; No. 1, \$6; No. A, \$3.
Testimony of Messrs. Jno. W. Wheeler, of Cleveland, Ohio, and Jno. C. Lefferts, of New-York.

PUTNAM MFG. CO.:
GENTLEMEN.—I know from practical experience that iron well galvanized with zinc will not oxidize or rust one particle. I can safely say, after several years experience in the manufacture of chain, for chain-pump and water-drawers, in which I have tested the affinity of iron and zinc, that if the process be conducted properly, it is a perfect weld of the two.

Nearly one year ago my family commenced using one of your Wringers. It now performs all of its functions as well as it did the first time it was used, and has become an indispensable article with us. I have closely observed several other kinds of clothes-wringers, the modus operandi being different, trying to produce the same results as the Putnam Wringer, but in my judgement they have failed. The Putnam Wringer is as near perfect as possible, and I can cheerfully recommend it to be the best in use.

Respectfully yours,
JOHN W. WHEELER.

Many years' experience in the galvanizing business enables me to indorse the above statement in all particulars.

JOHN C. LEFFERTS,
No. 100 Beekman-st.

New-York, January, 1864.

Manufactured and sold, wholesale and retail, by
THE PUTNAM MANUFACTURING CO.,
No. 13 Platt-st., New-York, and Cleveland, Ohio.

S. C. NORTHROP, Agent.

STAMMERING.

And Stuttering cured by Bates's Patent Scientific Appliances. For (new edition of) Pamphlets and Drawings describing the same, address H. C. L. MEARS, 377 West 23d Street, N. Y.



No Iron Frame to Break, or Rust, and Spoil the Clothes.

53,818 sold in 1863.

It was pronounced superior to all others at the World's Fair at London, 1862. It took the FIRST PREMIUM at the great Fair of the AMERICAN INSTITUTE, in New-York City, 1863.

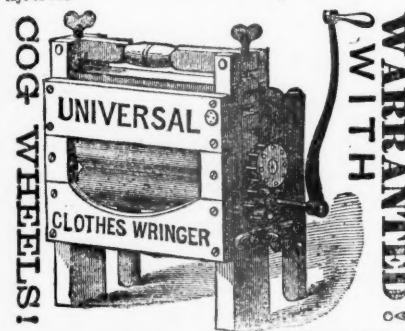
It took the FIRST PREMIUM at the
NEW-YORK STATE FAIR.....1862 and 1863.
VERMONT STATE FAIR.....1863.
PENNSYLVANIA STATE FAIR.....1863.
IOWA STATE FAIR.....1863.
ILLINOIS STATE FAIR.....1863.
And at County Fairs without number.

SELF-ADJUSTING and ADJUSTABLE!
The only Wringer with the Patent

Cog Wheel Regulator,
which POSITIVELY prevents the rolls from
BREAKING, OR TWISTING ON THE SHAFT.

Without Cog-wheels, the whole strain of forcing the cloth through the Machine is put upon the lower roll causing three times as much strain upon the lower roll as when Cog-wheels with our Patent Regulator are used, besides the extra strain upon the cloth. Experience shows that Clothes Wringers without Cog-Wheels cannot be depended on.

In reply to the question, "How LONG WILL IT LAST?" we can only say, "As long as a wash-tub, cooking-stove, or any other family utensil." See testimony of ORANGE J. JUDG, of the American Agriculturist, No. 41 Park Row, N. Y., who says of the



"We think the machine much more than PAYS FOR ITSELF EVERY YEAR in the saving of garments! We consider it important that the Wringer be fitted with Cogs, otherwise a mass of garments may clog the rollers, and the rollers upon the crank-shaft slip and tear the clothes, or the rollers break loose from the shaft. Our own is one of the first made, and it is as GOOD AS NEW after nearly FOUR YEARS' CONSTANT USE."

IT SAVES
TIME, LABOR, CLOTHES AND MONEY.

It is easily and firmly secured to the tub or washing-machine, and will fit tubs of any size or shape. It is not only a PERFECT WRINGER, but the Cog-wheels give it a POWER which renders it a most

EXCELLENT WASHER,
pressing and separating as it does the DIRT with the WATER from the clothes.

It will save its cost every six months in the saving of clothes. We have seven sizes, from \$5.50 to \$30. The ordinary family sizes are No. 1, \$10, and No. 2, \$7. These have



AND ARE WARRANTED

In every particular.

This means, especially, that after a few months' use, the lower roll

WILL NOT TWIST ON THE SHAFT,
and tear the clothing, as is the case with our No. 3, and other Wringers without Cog-wheels.

In our monthly sales of over 5,000, only from one to two dozen are without Cogs. In our retail sales we have not sold one in nearly two years! This shows which style is appreciated by the public. This is the only Wringer with the

PATENT COG-WHEEL REGULATOR,
And though other Wringer makers are licensed to use our rubber rolls, yet none are ever licensed to use the Cog-wheel regulator. Therefore, for cheapness and durability, buy only the

UNIVERSAL CLOTHES WRINGER.
On receipt of the price, from places where no one is selling, we will send the U. C. W., FREE OF EXPENSE. What we especially want is a good

CANVASSER

In every town. We offer liberal inducements, and guarantee the exclusive sale,
R. C. BROWNING,
447 Broadway, New-York.

Every Church, Sunday School and Private Family may have

A GOOD ORGAN

at a very moderate cost.

\$83, \$100, \$110, \$135, \$165, \$260 and upwards, according to number of stops and style of Case.

They are elegant as pieces of furniture, occupying little space, are not liable to get out of order; and every one is warranted for five years.

The **CABINET ORGANS**, introduced about a year since, and manufactured exclusively by MASON & HAMLIN, have met with success unprecedented in the history of musical instruments. Supplying a long felt want, they have been received with the greatest favor by the musical profession and the public, have already been very widely introduced, and the demand for them is still rapidly increasing, and must continue to increase as their merits become known. They are to private houses, Sunday Schools, and smaller churches, all that the larger pipe organs are to large churches. In addition to this, they are admirably adapted to the performance of Secular as well as Sacred music.

The **CABINET ORGAN** is essentially different from a very great improvement upon all instruments of the Melodeon or Harmonium kind. Its superior excellence consists in many important characteristics, among which are:

1. The more organ-like character of its tones. Indeed, it is asserted with confidence that it has not yet been found possible to produce a better quality of tone from pipes than is attained in these organs.
2. It has greatly more power and volume of tone in proportion to its cost.
3. By the employment of a very simple and beautiful invention, its capacity for expression is made vastly greater than has ever before been attained in such instruments. This invention is especially valuable, because scarcely any practice is necessary to render it available. Any ordinary performer can master it in an hour or two.
4. It admits of great rapidity of execution, adapting it to the performance of a greater variety of lively secular music.
5. No instrument is less liable to get out of order.
6. It will remain in tune ten times as long as a Piano-forte.

It may be reasonably said that if these instruments have the great and obvious superiority thus claimed for them, they must have received very warm recommendations from professional musicians who would naturally be most interested in the introduction of such instruments, and who are the best judges of their excellence. Such recommendations have already been given to them, to an extent unparalleled. Among those who have proffered written testimony to their admirable qualities and great desirability, and that they regard them as **unequalled** by any other instruments of their class, are such well-known musicians as LOWELL MASON, THOMAS HASTINGS, WILLIAM B. BRADBURY, GEORGE F. ROOT, &c.; the most distinguished organists in the country, as CUTLER, of Trinity Church, N. Y.; MORGAN, of Grace Church; ZUNDEL, of Mr. Beecher's Church; BRAUN, WELLS, WILCOX, TUCKERMAN, ZERRAHN, &c.; such celebrated pianists as GOTTSCHALK, WM. MASON, MILLS, SANDERSON, STRAKOSCH, etc.—In brief, more than two hundred musicians, including a large portion of the most eminent in the country, have testified to this effect. Each **CABINET ORGAN** is securely boxed so that it can be sent safely to any part of the country.

Illustrated Catalogues with full particulars, FREE to any address.—Warehouses, No. 7 Mercer-st., New-York, and No. 274 Washington-st., Boston. Address
MASON BROTHERS, New-York,
or MASON & HAMLIN, Boston, Mass.

Parton's Butler.

Sixth Edition.

FIFTH OF NOTICES OF THE METROPOLITAN PRESS.

NEW YORK says: "Singularly entertaining." "brilliant," "racy," "of permanent authority," "just and faithful."—[Tribune.] "Perfectly exhaustive of the subject."—[Times.] "Our best writer of biography." "clear, graphic, spirited and very impressively narrated."—[Independent.] "Very interesting."—[Eve. Post.] "One of the freshest and most interesting works."—[Com. Advertiser.] "Very entertaining and instructive."—[Evangelist.] "No one can fail to be interested."—[Observer.]
BOSTON says: "Faithful and conscientious, interesting for general reading, and valuable as a contribution to the history of the times."—[Journal.] "Clear, correct and minute." "No work on the war which, on the whole, can be said to equal it."—[Traveller.] "Interesting," "instructive," "most important addition to the history of the times."—[Advertiser.] "Sharp and piquant." "Absolutely the most interesting." "Racy, spicy and readable."—[Post.] "Every page is full of interest."—[Commonwealth.] "Brilliant and remarkable career." "Graphic and interesting." "Exceedingly well written."—[Commercial Bulletin.] "Cannot fail to be sought after." "A book which one will wish to keep."—[Sat. Eve. Gazette.] "Remarkable ability as a biographer." "Will attain a great popularity."—[N. E. Farmer.] "Bold and dashing."—[Recorder.]

Sent by mail, postage paid, on receipt of the price, \$2.00.

Mason Brothers,

No. 7 Mercer Street, New-York.

50 First Premiums in 1863.



GROVER & BAKER'S
CELEBRATED ELASTIC STITCH

Sewing Machines

Were awarded the highest premiums over all competitors at the State Fairs of New-York, Vermont, Iowa, Indiana, Michigan, Illinois, Kentucky, Pennsylvania, Ohio, and Oregon, and at every respectable Institute and County Fair held in 1863.

Sales-rooms 495 Broadway, New York.

TRUSSES.—RADICAL CURE
OF HERNIA OR RUPTURE.—Dr. S. N. MARSH, of the well-known house of Marsh & Co., No. 2 Vesey-st., Astor House, opposite the church, devotes special attention to the surgical adaptation of his Radical Cure Truss. Also every kind of Trusses, Supporters, Shoulder Braces, Elastic Stockings, and Mechanical appliances for Deformities. (A lady attendant.)

TOBACCO.

Just How to Grow it.

Every particular, from the selection of the Seed, and preparation of the ground, to the Gathering, Curing, and Marketing the Crop, is given in a work issued by the Publisher of the *American Agriculturist*, and sent post-paid for 25 cents. This work consists of a selection of the best fourteen out of eighty-five Essays, prepared by eighty-five different cultivators, residing in various parts of the Northern and Middle States. In each of the Essays contained in this work, the writer tells, in a plain, practical, straight-forward manner, just what to do, and how to do it. Any item omitted by one is given by another, so that the information is full and complete. Several engravings illustrating the method of drying, packing, etc. The work is worth its weight in silver to every one growing even a small plot of tobacco.

A Comprehensive Book.

TO YOUTH.—Impositions practised by advertisements, headed "Physiology, Marriage Guide, Loss of Memory, Impaired Vision, Nervous Debility, Manhood Restored, Youthful Indiscretion," &c., &c.
Advantage of Pure Air during Sleep; Ill Effects of the Young Sleeping with the Old; Do. Well with the Sick; Safe Ventilation of Sick-Rooms; Ventilation of Buildings by Gricom; Hamilton's do. and Tenement-Houses; Baker's Plan of Warming and Ventilation; Andrews & Dixon by Open Fire-places do; Balafulness of small and Crowded Chambers; Importance of Sound, connected, sufficient Sleep; How to secure it to Nursing Mothers; Do. to Infants at Night; Sleeplessness, its Prevention and Cure; Importance of Full Sleep to Growing Children; Do. to those at School; Debilities, Nervousness, etc., from this and other causes; Cure and Prevention of; Amount of Sleep Needed; Chambers should be Light, Airy, High, and Dry; Single Beds, Crowded Chambers, etc. etc. See book on "Sleep," 330 p. 12mo., \$1.25; by mail, \$1.50, by the Editor of HALL'S JOURNAL OF HEALTH, and Author of Bronchitis and Kindred Diseases, Consumption, Health and Disease, (each \$1.15 by mail); of Soldier Health, 25 cts., "Health Tracts" 200 of one page each \$1.25, (by mail \$1.50), on eating, drinking, sleeping, exercise, dyspepsia, baths and bathing, costiveness, sick head-ache, throat ail, cold feet, sleep, &c., &c.
Address

HALL'S JOURNAL OF HEALTH, New-York.

DEVILS CAST OUT.—The best music for our growing daughters to practise, the best poetry for humanizing, human husbands, Graham Bread, Erysipelas, Falling Hair, Stings and Bites, Flies Destroyed, Boiling Potatoes, How to purchase family Supplies, over eating, sick headache, White-wash for Barns, Fences, &c., Wet Feet, Costiveness Biliousness, Poison, Paste, Liquid glue, Moths, Bedbugs, Ants, Keeping Butter, Lightning Rods, Eyes in Sewing, &c., \$1 a year, 331 Broadway, New-York.

Wanted Immediately, One Hundred Men

to act as Agents for the sale of HEADLEY'S HISTORY OF THE GREAT REBELLION, the most attractive, popular and salable Work on the present War, as the extraordinary large number already sold, abundantly proves. The Author is too well known and appreciated to need any recommendations, the sale of his Works having reached a far greater number than any other Authors in this country. A fine opportunity is here presented for Teachers, Students, Farmers, and all intelligent persons to make money. For particulars apply to or address

HURLBUT, WILLIAMS & CO.,
148 Asylum St., Hartford Conn.

TO ADVERTISERS.

MERCHANTS, MANUFACTURERS, INVENTORS, REAL ESTATE OWNERS, SCHOOLS, AND ALL OTHERS WHO DESIRE TO REACH CUSTOMERS IN ALL PARTS OF THE COUNTRY, WILL FIND IT TO THEIR INTEREST TO ADVERTISE IN THE NEW-YORK TRIBUNE.—The circulation of THE TRIBUNE is larger than that of any other Newspaper, and it is read by the most enterprising, thrifty, and industrious classes. Advertisements inserted in each of the editions of THE TRIBUNE, DAILY, SEMI-WEEKLY, and WEEKLY, will be read by nearly a million of people, and no investment pays a business man so well as the money he spends in judicious advertising. The investigation by the Mayor and Comptroller of the City resulted in naming THE DAILY TRIBUNE as being chosen as one of the two papers having the largest daily circulation, and its weekly edition is acknowledged to be far greater than that of any other Newspaper.

RATES OF ADVERTISING IN THE NEW-YORK DAILY TRIBUNE.

Ordinary Advertisements, classified under appropriate heads, 12½ cents per line each insertion, or \$2 50 per line per month.

ABOUT EIGHT WORDS AVERAGE A LINE.

SEMI WEEKLY TRIBUNE.

THE SEMI-WEEKLY TRIBUNE has a very large circulation in the country, and is second only to THE WEEKLY TRIBUNE as an advertising medium.

Price TWENTY-FIVE CENTS a line each insertion.

THE WEEKLY TRIBUNE.

ORDINARY ADVERTISING—\$1 a line each insertion. ITEM—in the News Column, prefixed by word (Advertisement)—\$1 25 a line each insertion.

OPINIONS OF ADVERTISERS.

I consider THE WEEKLY TRIBUNE the best advertising medium in the country, and it is one of the best mediums for advertising in most of the leading weeklies of the Union. It is not only the best, but it is, in the end, the cheapest. GEORGE W. CHILDS.

We concur in the above.

A. S. BARNES & BURN, Publishers, Booksellers, and Stationers, Nos. 51 and 53 John-st., New-York.

Boston, Dec. 18, 1863.

Our experience in advertising in THE WEEKLY TRIBUNE has satisfactorily proved to us that it is one of the best mediums for advertising in the country. We have often received what we know to be direct returns from it, and are only surprised that more do not avail themselves of your wide circulation. Yours very truly, WALKER, WISE & CO., Publishers and Booksellers.

New-York, Dec. 11, 1863.

Several years of quite constant use of the book advertising columns of THE TRIBUNE has satisfied me that, through other paper can a larger class of intelligent buyers be addressed. I have also found the WEEKLY, notwithstanding the apparent high rates charged for space, a most economical, as well as sure means for reaching large numbers of energetic men, and securing their services as agents.

N. C. MILLER, Publisher of Subscription Books, New-York.

Boston, Dec. 9, 1863.

We consider THE WEEKLY TRIBUNE one of the best mediums for advertising our publications. Notwithstanding its seemingly high charges, its very large circulation renders it one of the cheapest and best means by which to reach the public. OLIVER DITSON & CO.

THE PROFIT OF ADVERTISING—A BUSINESS MAN'S EXPERIENCE.—The Rochester Express says: "We found the following letter from Mr. A. Morton, in THE NEW-YORK TRIBUNE, a few days since. Mr. Morton, as is well known, is the manufacturer of the celebrated Gold Pens advertised in our columns. He is one of the most extensive and judicious advertisers in the country, and we would respectfully commend his ideas on that subject to our business men. We do this in recognition of the value of THE NEW-YORK TRIBUNE as an advertising medium, and only add that we have reason to believe that in proportion to the expense required, an equally profitable result has been secured from his advertising in THE Express. We give the letter as it appeared in THE TRIBUNE."

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From N. Y. Tribune, Dec., 1863.

Homes in New Jersey.

By SOLON ROBINSON.

Agricultural Editor of the New York Tribune.

**How to Settle a New Country—Vineland—
The System upon which Large Tracts
of New Land in West Jersey have been
brought into Use—Hammondton and
Vineland—Condition of the Settlements
—Character of the Soil and its Pro-
ducts—Combined Efforts and the Re-
sult.**

In the Autumn of 1861, I think about the 1st of September, I left New-York upon an exploring tour. I was going to a new country. You need not imagine that I was bound to Nebraska, nor Utah. There are wildernesses nearer to this great city. You may plunge into a very deep one in twelve hours' travel north-west, or in half the time south-west. Upon the present occasion I went southward. I was bound to the wilderness of West Jersey. Perhaps you are not aware, as you fly through the rich agricultural county of Burlington, that you are skirting the wilderness; that only a few miles further to your left, you could purchase 20,000 acres of wood land in one unbroken tract. It was such a tract that I was going to look at. I had heard of the successful settlement of 5,000 acres of new land at a place called Hammondton (derived from Hammond's mill, which was about the only sign of life on the tract; and that in its dilapidated condition had a decaying, deathlike look).

Now, everything around there looks life-like and prosperous. All around are neat, comfortable farm-houses, gardens, orchards, vineyards, fields of grain—plenty, comfort and happiness. It is no longer a wilderness. Seven years ago the wood-chopper and coal-burner held undisputed possession, and if any one inquired why the land was not cultivated, he was told that it was barren. Look at it now and tell me if you think it barren.

The leading spirit in working out that change, from scrub oaks to orchards; from pitch pines to fruitful vines, was Charles K. Landis, a native of Lancaster, Pa., who having accomplished his mission at Hammondton, looked about for a wider field. In correspondence with him, I learned his intentions, and went to see what he proposed to do at his new location. I found that he had purchased twenty thousand acres in Cumberland County, a few miles north of Millville, and some thirty or thirty-five miles southerly from Philadelphia. This tract has been held since the first settlement of the State by the proprietors of iron and glass manufactories, to furnish them wood and coal, and only here and there a little opening had been made for cultivation, until, two or three years previous to my visit, some very successful efforts had been made at farming. Although, at first sight, the soil appeared to be too largely composed of sand and gravel to be productive, a closer examination showed a fair percentage of clay, and that the land had been an ocean bed, and was filled with calcareous matter, which made it very productive of profitable crops, notwithstanding its forbidding appearance to one who had cultivated the prairie soil of Indiana, and was familiar with the bottom lands of the Mississippi. I was convinced by the fact that the land had born successive crops of wood, that it was not barren, and I stated my convictions in an article published in THE TRIBUNE, that this was a good new country for those desirous of emigrating from an old one, or seeking a new home in a milder climate than that of northern New-York and New-England. My motive then, as now, was to give trustworthy information about an interest which THE TRIBUNE tries to promote—the interest of those who desire to own land, and for want of abundant means, may have to make "new homes in the wood." I wished to tell them how and where. I did not know Mr. Landis, nor did I care for his success, only it promoted the interests of the people who might wish information about his land. I will say that I was pleased with the man, for I found him, not wrapped up in sordid money-making plans. He had bought the land as a man buys merchandise, to sell, and it was an object with him, of course, to sell at a profit, and he appeared to exercise such tact in making his arrangements that while he would ultimately secure his object, he would also afford to a great number of people comfortable homes, at low prices for the soil, and by a sort of combination of interests, the new settlers would suffer much less of the inconveniences of a new settlement than usually attach to those who make homes in the woods. He evidently understood "how to settle a new country," and this is a point to which I would draw particular attention. I have had much experience in making new homes in the woods—once fifteen miles from neighbors. I have always found a great difficulty in the lack of combined effort. In the want of system—such system as cannot be practised where each individual acts independently—in opening roads for new settlements, and forming centers of business for trade, travel, mechanical and manufacturing works. The inconvenience of spending a week on a trip to mill can be appreciated by a few pioneers and only a few. In the settlement of West Jersey very few

of the inconveniences of new settlers are ever felt. Let us see why.

In my first visit to the tract under consideration, I found Mr. Landis engaged with a corps of surveyors and axmen opening roads and plotting the tract into small farms and a site for a village in the center, and a railway station on the road from Philadelphia to Millville, but not an acre of land had been sold, though two or three new farms, previously located on the tract, were just beginning to demonstrate the productiveness of the soil, and gave me full assurance that the new settlement of "Vineland" would be equally as successful as Hammondton had already proved, and as the tract was four times as large, would afford more than four times as many homes for those in need, because it would support a larger commercial center. As I looked at the enterprise, in a utilitarian point of view, and not as a mere "land speculation," I said what I hoped would induce others to go and see for themselves, and perhaps secure homes for their families, which they could call their own.

My second visit was made in October, 1863, and it gave me abundant reason to be satisfied with all that I said two years previous. Let me tell what change these two years have wrought in the wilderness. Of the satisfaction which individuals expressed for my advice to them, I will only mention one case, though a good many others were equally satisfactory. Edgar Morehouse, after reading the article in THE TRIBUNE in 1861, wrote from Wisconsin that he was deaf and dumb; that he had but little capital; that he desired to have a home of his own, but that he was not satisfied with the climate of Wisconsin, and wished to know if I thought him a suitable settler for the new, cheap lands that I had described in Jersey. I had forgotten the circumstance, but he had not, as he met me with a smile at Vineland and said (with his pencil). "I am very much obliged to you for all you said of this place, and particularly for what you said to me in reply to my letter. I think you were right on the whole. You thought I had not quite means enough to come here, and that was true, but I came, and have got some employment besides upon my land, and have managed to pull through, and now you see I have got a snug little home for my family, and we are well pleased. And that is not all. I have planted THE TRIBUNE strawberries to-day, and I hope to live to eat the fruit and thank all the proprietors of that paper for it, as well as my home here."

Why should these people be satisfied with their new homes? Let us see. Instead of the wild scenes of two years previous, I found a village at the railway station, with two commodious hotel buildings, always full; several stores and mechanic shops, and a steam mill, nearly completed, and a busy post office, but not a single grog shop upon the whole tract. I found three church organizations: Presbyterian, Episcopal and Methodist, and two church edifices under way. When it is known that the population, which then numbered about 1,500 upon the whole tract, is mostly composed of natives of New-England and New-York, it is needless to say that school-houses already exist; that schools and churches are not neglected.

I found that in these two years about 300 houses had been built, some of which were like other small, rude new country homes, though no log cabins are allowed, while many have all the indications of comfort, thrift, and even elegance. I also found the number increasing at the rate of a new house every day. At least locations were taken at that rate, and all purchasers are obligated to build within a given time, and also to make certain public improvements on the street, road, or avenue, by clearing off the front and planting shade-trees, and seeding it in grass. Every house, too, must be set at a uniform distance from the road, which for farms is fixed at 75 feet, and upon town lots, 20 feet. The location of a house being chosen by the purchaser of a lot, is fixed exactly by Mr. Landis's surveyor, free of charge.

During these two years Mr. Landis has opened at his own expense 40 miles of public roads, mostly 100 feet wide, and these are grubbed out and made good for traveling as fast as farms are opened and the exigencies of the case require. One of these roads, leading east and west through the village, is in fine travelling condition six miles, and is to form part of a main road from May's Landing to Bridgeton, some 30 miles, between which points there has never been a direct road, because until now there were no inhabitants to require one.

At all the main road-crossings there is a plaza, of about an acre, and a larger one at the railroad-crossing at the village. Liberal provision is also made for church and school houses.

The town plat is laid off in lots 50 by 100 feet; price \$100 each, "first come, first served," and no change of price. The same rule holds with the farming lands, at \$20 an acre; good or bad, first sold or last, it is all the same. The farm lots are laid off in forty-acre tracts, but can be purchased in regular sub-divisions, larger or smaller as may be desired.

At first it was required that each front should be fenced with boards or pickets; but that requisition has been dispensed with, as the settlers have determined to do without fence, and woe to any outsider's cattle that trespass upon the Vineland domain.

When I was first there the tract was almost destitute of passable roads, other than narrow, crooked paths, for hauling out wood and charcoal, except one north and south road, and that was never made nor repaired, and there were only three or four houses on that in a distance of six or eight miles. Now in half a day's ride in various directions, I was never out of sight of new houses, already inhabited or building. Most of the buildings are frame, though a very good building material can be had cheaply, of a more durable character than wood. This is a kind of adobe or concrete brick, made of lime, sand and gravel, of a peculiar character that abounds on the land. The bricks are made eight inches wide, eighteen long, and six inches thick, and for a two-story house, 24 by 26 feet, with a one-story projection 12 by 26 feet, a contractor offered to make and lay up the walls for \$108, the owner furnishing the stone foundation, for which there are convenient quarries of a sort of sandy ironstone. I observed that the new steam-mill is made of this material, and the chimney of stone, which indicates that the brick are strong and the stone fire-proof.

After all this description perhaps readers will think that I have not answered the most important questions—"Is this land productive?" "Can a poor man locate there and live?" "What are the products?" These questions I will answer; for although I have not the remotest interest, direct or indirect, in Vineland nor any other land, nor with anybody there, nor elsewhere who has, I have the common interest of humanity that makes me desire to see every wilderness changed from the abodes of wild beasts to happy homes for my fellow men, and therefore desire to see this experiment succeed, and if it succeeds then I may hope to see a great many thousands of acres of similar land in New-Jersey, Delaware, Maryland and the Eastern shore of Virginia converted to some more valuable purpose than furnishing employment for a few half civilized charcoal burners and wood-choppers, rabbit hunters and cranberry pickers, such as have made up the population of large districts for many years.

To show what can be done I will relate a few facts of what has been done on the soil of Vineland.

Capt. Geo. L. Post was the first of Mr. Landis's purchasers. He was a refugee, if I mistake not, from Mobile, where he left a comfortable home, and finding, on his arrival North, the necessity of creating a new one, settled upon one of the farm tracts at Vineland, in Dec. 1861, where he has built a nice house and good barn, and he and his boy, with very little hired labor, have fenced his plot and got ten acres under cultivation, and four more grubbed ready for the plow. I found them digging potatoes; the average yield was 140 bushels per acre, fertilized with a light dressing of superphosphate. Upon adjoining rows, dressed with a little horse-dung and green sand marl, the yield would be greater, and not near as great where more horse-dung, but no marl was used. Marl costs \$1.05 a ton at the station, being bought by Mr. Landis in large quantities, and given to settlers in small quantities at cost. A ton contains about 20 bushels, and it is used in various quantities, from 20 to 200 bushels per acre, and is a very valuable manure. It appears to be particularly beneficial to grape vines, and the settlers are very rapidly making the place a real Vineland, for they have already started more than a hundred vineyards, and in some of them, which had no fertilizers whatever, I noticed a growth of canes 20 feet long the first season.

I noticed in the hotel garden as fine a production of vegetables of all kinds, particularly sweet potatoes, as one could desire. In various gardens I saw very thrifty pear and peach trees, and on the farm of a Mr. Gerow, formerly a clerk in THE TRIBUNE office, a very large plot of exceedingly thrifty strawberries. Everywhere the appearance of the Indian corn was beautiful, being just then in the perfection of its full growth and ripeness. I did not hear a single one complain of unproductiveness of the soil. Why should they? Here is the reason why not:

I found a reason quite sufficient for me upon one of the farms that I visited. It is owned by Robert Brandriff, three miles north of Millville, and the soil is of the same character as the most of the Vineland tract. Indeed this may be said to be a part of it, though it was purchased by Mr. B. ten years ago. He must have known the nature of the soil and its capabilities for he was born within two miles of his present location. He has 60 acres under cultivation, all of which he has cleared and fenced with his own hands. This farm is in a beautiful state of cultivation, and his crops show that it is profitable. It is so easily worked that he finds one mule quite sufficient for plowing. His principal reliance for fertility is upon clover; yet he told me until he was 17 years of age, he never saw grass grown as a crop. The study was how to get rid of it.

He farms upon what is termed the five-course system—that is, one year wheat, the ground for which is manured broadcast, if he has the manure to spare, which is not always the case. The wheat land is sown with clover-seed, and the crop cut two years, in June for hay, and in September for seed. The fourth year it is planted to corn without manure, and yields from 50 to 80 bushels per acre of shelled corn. The wheat crop ranges from 12 to 20 bushels, and will average 15; it was 18 this year. The clover hay sells at \$12 a ton out of the field, which is equal to \$20 when dry. The yield is always large, and the after-growth Mr. B. thinks of great advantage to the land. He believes in all kinds of mulching.

The fifth year of the course the land is well manured for a vegetable crop, principally potatoes, with a large patch of cabbage, which sells for two cents a pound and in a good season is very profitable, making, from 5,000 heads per acre, full \$200. Beets, carrots, rutabagas, squash, lima beans, tomatoes, cucumbers, etc., are grown as part of the vegetable crop, which averages \$100 per acre, and are all off in time for the wheat sowing, and leave the land in fine condition for that crop. Straw sells readily at \$10 a ton, but Mr. Brandriff has learned better than to sell it for that. He prefers to feed it at home and convert it into manure. His system of farming does not permit him to keep much stock, but as he makes the most of everything for manure, he does not have to buy much. The two years in five of clover and one in wheat, with an after-growth that keeps the ground well shaded, holds it in good fertility. Indeed he considers his oldest fields the best, and as he has cleared and fenced his farm with his own hands, and has paid for it and good buildings with its proceeds, beside supporting a family, and "getting a little ahead," he is pretty well satisfied that he is not located in a barren country. Yet his farm is just what the whole region may be under the same system of cultivation, and that is why I have and do still advocate its settlement and conversion to usefulness. I recommend Vineland, because, while the land is held at a reasonable price, it is systematically managed, and a liberal share of the proceeds are expended by the proprietor in such a manner that every one enjoys the benefits, and every new settler feels the advantage here of a good neighborhood, such as isolated settlers in the woods cannot have. I do not say that other tracts are not good, but I do not know any that afford all the advantages that this does to those in need of cheap homes.

In conclusion, I ask one favor of my readers. Do not bore me nor THE TRIBUNE for further information. You have the name of the proper person to address; write to him, and not me. S. R.

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We respectfully solicit the kind efforts of all our readers in extending the circulation of this journal, the present month. If they each send only one subscriber now, the desired 100,000 will be far exceeded. Will the reader favor us with one of these names?—The old price is yet continued.

Special Notice to Advertisers.

It will be seen that the terms (given in the usual place) are slightly advanced, but they are still lower than those of any other journal—considering the large circulation, the select character of those admitted, the good style of printing, and the length of time each number is before the reader. Let any one who thinks his bill large, ask his printer to estimate the cost of getting up 80,000 to 100,000 cards or handbills of the same size as his advertisement. He will find it to cost nearly double our rates, to say nothing of the fact that the cards are here stereotyped—fastened into the paper—and distributed, not at random, but only one to each reading family. We shall certainly print 80,000 copies of every number this year, for subscribers, and probably 100,000 or more before ceasing to send out the first numbers of the volume. As before stated, we want none but good advertisements, and require reference as to integrity and reliability, from advertisers unknown to us personally or by reputation. We reserve the right to leave out any and all advertisements not desired for any cause.

N. B. We run four Steam Cylinder Presses (one for each side of the two sheets); but to print the engravings, etc., well, we can only perfect 6000 to 7000 copies a day; so we must start by the 15th of the previous month, and all advertisements must be in before that time. As only part of the good advertisements offered can be inserted, we leave out the last comers. Better send in copy by the first of the month, to secure insertion. This also gives more time for setting up neatly, and changing if desirable.

About the Advertisements—Suggestions to Our Readers.

I. It is often asked, "How can the *Agriculturist* be afforded so cheaply at the present time?" Answer—The greatly increased subscription, involving only the extra cost of paper, press-work, and printing, helps out in part; and the rest is done by admitting more advertisements and at higher rates. As more than enough are almost always offered, the only question is, how much space shall we give to this department? Even if the advertisements were not valuable to the reader, none would complain at the increased room they occasionally occupy, when we tell them that during 1863 we expended upon the paper ALL the money received from subscribers, and some thousands of dollars more of advertising receipts. As we now pay \$2.00 per ream more for printing paper than the average cost during last year, we must give up more space to advertisements, and condense more into the reading pages.

II. But the Advertising pages are valuable to the readers, especially when sifted as ours are. We do not say that every article admitted is wanted by all our readers, nor that every thing advertised is in all cases worth the price asked—of that the reader must judge—but we aim to admit no advertiser who will not do just what he offers to do, and we mean to shut out all deceptive or worthless things. We have refused a dollar a line for many medicines, etc., which are admitted into the religious press generally, but which we would advise a friend not to buy or use. We hazard nothing in saying that no equal numbers of cards of so good and reliable parties, were ever thrown together in a single copy of any journal, as appear in this paper. As a rule, our readers can send orders direct to the parties whose cards are found in the preceding pages; or if the articles are not fully described, send for the circulars, catalogues, etc.

III. We advise a thorough examination of all the business cards. (Except the "Business Notices," they are inserted with no reference to choice of place, but in classes, or at the convenience of the printer; so that the last, the first, and the middle pages are of equal value.) They tell where, and frequently at what price, various articles can be bought. In this respect the advertising columns are like a good "Variety Store" brought to each man's door. This leisure winter month is a good time to look out for trees in advance, plants, seeds (now sent cheaply by mail), and for implements, etc.

IV. When sending orders, or for circulars, etc., please name in the letter, where the advertisements were seen. This, we are frequently assured, is especially pleasing to the advertisers: it tells them where they find intelligent, wide-awake men, on the lookout for what is going on.

PREMIUMS for 1864.

Or Pay to Voluntary Agents who attend to Collecting and forwarding Clubs of Subscribers to the American Agriculturist.

Table of Premiums and Terms.

* Open to all—No Competition.

Names of Premium Articles.

GOOD BOOKS—See terms below *	Price of Premium.	Amount at 10c each.	Amount at 25c each.
A—American Cyclopaedia (Appleton's New)	\$50 00	130	250
B—Best Family Clothes Wringer	\$7 00	19	45
C—Nonpareil Washing Machine	\$16 00	40	90
D—Sewing Machine, (Wheeler & Wilson)	\$15 00	38	85
E—Sewing Machine, (Wheeler & Wilson)	\$40 00	82	185
F—Woodruff's Mercurial Barometer	\$8 00	20	45
G—Woodruff's Mercurial Barometer	\$12 00	30	65
H—The Aquarius	\$10 00	25	55
I—Five Octave Melodeon (best)	\$30 00	75	160
J—Four Octave Melodeon (best)	\$60 00	150	320
K—Seven back Volumes Agriculturist	\$5 00	13	28
L—Six do do do do	\$7 44	19	42
M—Five do do do do	\$6 20	16	35
N—Four do do do do	\$4 96	13	28
O—Three do do do do	\$3 72	10	22
P—Two do do do do	\$2 48	7	16
Q—One do do do do	\$1 24	4	10
R—Jacob's Portfolio Paper File	\$1 50	4	10
S—Osborn & Hodgkinson's Paints	\$1 50	4	10
T—Premium Cylinder Plow	\$10 00	25	55
U—Eagle Plow No. 30	\$9 25	23	50
V—Hay and Straw Cutter (best)	\$9 00	23	48
W—Steel-tooth Cultivator (best)	\$7 50	19	42
X—Family Lard and Wine Press	\$7 00	18	40
aa—Case of Drawing Instruments	\$5 00	13	28

No charge is made for packing or boxing any of the articles in this Premium List. The books, and the Premiums K, to S, inclusive, are DELIVERED to any part of the United States and Territories, free of all charges. The other articles cost the recipient only the freight after leaving the manufactory of each. Every article offered is new and of the very best manufacture.

Full particulars in reference to the premium articles and the terms, are given in the January *Agriculturist*, page 21. We invite the continued efforts of our friends, in filling up premium clubs under way, and new premium lists may still be started. Many hundreds have already secured and received one or more of the above good articles. * The book premiums are to be selected from our list on page 63—to the amount of 10 cents for each subscriber sent in clubs at 80 cents; or to the amount of 30 cents for each name at \$1 a year. But no book premiums are given, where the club does not number at least 20 names. The books are delivered free of cost, by Mail or Express, to any part of the United States and Territories, and to the borders of the British Provinces. Many Farmers' Clubs have united their efforts, and by means of this premium, obtained a good library.

N. B.—The varying cost of books and other articles, may require some change in the above premium terms, from time to time. The terms, therefore, hold good only for the particular month in which they are published.

CLUBS can at any time be increased, by remitting for each addition the price paid by the original members, if the subscriptions all date at the same starting point. The back numbers will of course be sent to added names.

Back Volumes & Numbers Supplied.

We have complete sets of Vols. 16, 17, 18, 19, 20, 21, 22, both unbound, and bound in neat covers with gilt lettered backs. Prices at the office: bound \$1.50, unbound \$1.00 each. Back Volumes are sent prepaid by mail, (they can go unpaid,) if bound, \$2.00 each; if unbound, \$1.24 each. Single numbers of any of the above Volumes, 10 cents each.

Binding.—Sets sent to the office will be bound up neatly (in our regular style of binding) for 50 cents a volume.

American Agriculturist.

For the Farm, Garden, and Household.

A THOROUGH-GOING, RELIABLE, and PRACTICAL Journal, devoted to the different departments of SOIL CULTURE—such as growing FIELD CROPS; ORCHARD and GARDEN FRUITS; GARDEN VEGETABLES and FLOWERS; TREES, PLANTS, and FLOWERS for the LAWN or YARD; care of DOMESTIC ANIMALS, etc., and to HOUSEHOLD LABORS, with an interesting, instructive department for CHILDREN and YOUTH. The Editors are all PRACTICAL WORKING MEN.

The teachings of the AGRICULTURIST are confined to no State or Territory, but are adapted to all sections of the country—it is for the whole AMERICAN CONTINENT.

TERMS—INVARIABLY IN ADVANCE.

(For either the English or German Edition.)

One copy, one year.....\$1 00
Six copies, one year.....5 00
Ten or more copies one year.....80 cents each.

Add to the above rates: Postage to Canada, 12 cents; to England and France, 24 cents; to Germany, 36 cents.

Postage anywhere in the United States and Territories must be paid by the subscriber, and is only three cents a quarter, if paid in advance at the office where it is received. Address all communications to the Editor and Proprietor, ORANGE JUDD, 41 Park-Row, New York City.

AMERICAN AGRICULTURIST,

Supplement for March, 1864.

DESCRIPTIVE CATALOGUE OF New and Beautiful BEDDING PLANTS, FOR THE DECORATION OF THE FLOWER GARDEN.

Mailed to all applicants.

PETER HENDERSON, Jersey City, N. J.

SAMPLES at 67 Nassau Street, New-York.

SEEDS FOR THE FARM AND GARDEN.

Mailed post-paid to all the Loyal States. The following list of seeds, the purity and vitality of which can be confidently recommended, will be mailed as above, upon receipt of the prices affixed:

	Per os.	1/2 lb.	lb.
Beets—White French Sugar, Mangel Wurzel.	Sc.	\$0.30	\$0.50
“ Early Bassano, Turnip, Long Blood.	10	0.40	0.75
Cabbage—Early York, Large York.	20	1.25	2.00
“ Large Drumhead and Golden Savoy.	30	1.50	2.50
“ Premium Flat Dutch, Red Dutch.	20	1.50	2.50
“ Winningstadt, Stone Mason.	25	1.75	3.00
“ (Marblehead Mammoth very large, per packet 25 cents.)			
Cauliflower—Half Early Paris, the very best.	100	7.00	13.00
Carrot—Improved Long Orange, extra deep color.	10	0.75	1.50
“ Altringham, White Belgian.	10	0.60	1.00
“ Extra Early Short, Early Horn.	10	0.75	1.25
Celery—Incomparable White, Mammoth Red.	30	1.20	2.50
Cucumber—Early Russian, Long Green.	30	0.80	1.50
“ Early Frame, White Spine.	10	0.50	0.75
Kohl-Rabi—Early White, Purple.	20	1.25	2.00
Lettuce—Early Silesia, Summer Cabbage.	30	1.25	2.00
“ Large India, Boston Curled, Paris Cos.	25	1.60	3.00
Muskmelon—Green Citron, Nutmeg, Christiana.	15	0.75	1.25
Onion—Yellow Danvers, White Portugal.	35	1.75	3.00
“ Ied Wetherhead.	20	1.25	2.00
Parasol—Long White, Hollow Crown.	10	0.50	0.75
Radish—Early Frame, Olive Shaped, Salmon Top.	10	0.40	0.75
Salsify.	30	1.25	2.00
Spinach—Round and Prickly.	10	0.50	0.75
Squash—Summer Crookneck, Scallop.	10	0.40	0.75
“ True Boston Marrow.	15	0.80	1.50
“ Hubbard (true).	10	1.10	2.00
Tomato—Early Red, Round Smooth.	30	1.25	2.25
“ Fejee Island, Large Yellow.	35	1.50	2.50
“ New Erect French—grows upright per packet, 10 cents.			
Turnip—Early Dutch Red Top.	10	0.40	0.75
“ Ruta Baga, Skirving's, Laling's.	10	0.30	0.50

Prices for larger quantities will be given upon application. Address, B. K. BLISS, Springfield, Mass.

Seedling Carnation “BEAUTY OF BROOKLYN.”

Messrs. DAILEDOUTE, ZELLER & Co. have the pleasure of announcing that they will send out, January 1st, their new Seedling Carnation, **Beauty of Brooklyn**. It has taken two first class prizes, and is a model in its class. It is of good stocky habit, and a profuse bloomer. The form is very fine, and the colors pure and distinct, one petal being white and the other Magenta color. It is a unique and beautiful flower.

Price, \$2 each; \$10 per half-dozen; \$18 per dozen.

ALSO, All Good Varieties of CARNATIONS to be found in this country or in Europe (nearly 75 varieties). Address, DAILEDOUTE, ZELLER & Co., Flatbush, L. I.

Choice Garden Seed.

My Annual Catalogue is now ready, and will be forwarded, gratis, to all applicants. Those who have received it heretofore, need not write for it, as I shall forward it gratis to their address. My Catalogue includes not only all the kinds of Garden Seed to be found in seed stores, but many new and choice varieties not usually found in seed Catalogues. Most of my seed is of my own growing.

JAMES J. H. GREGORY, Marblehead, Mass.

SUGAR TROUGH GOURD SEED, 25 cents per package. For description see notice of gourd exhibition in December Agriculturalist.

WALDO F. BROWN, Oxford, Ohio.

COLLECTIONS OF KITCHEN GARDEN SEEDS,

BY MAIL, POST-PAID.

Twenty varieties, our selection.....\$1.00
Forty-five.....2.00
The above collections embrace all the leading varieties of Vegetable Seeds usually grown in our gardens. To those who desire larger quantities, we would recommend our collections at \$30.00, or \$15.00, or \$10.00, or \$5.00, and \$3.00, suitable for large or small gardens, which can be safely forwarded by express to all parts of the world. A list of the contents of each collection will be found in our New Descriptive Catalogue, which will be sent to all applicants upon receipt of two three-cent stamps. Address, B. K. BLISS, Springfield, Mass.

FLOWER SEEDS BY MAIL—The subscriber raises about one hundred kinds of Flower Seeds, selected from over one thousand varieties, of the most showy and attractive. He will furnish, neatly put up, any 33 kinds on the list for \$1, and send by mail, with postage prepaid, G. R. GARRETSON, Flushing, N. Y.

50,000 CRANBERRY PLANTS for sale by GEO. A. BATES, Hingham, Mass. Send for Circular on the Cranberry and its Culture.

IONA VINES.

GRAPE VINES for Garden and Vineyard of unequalled quality, and at prices lower than the cost of production at the present prices of labor. For all the considerations upon which success in grape culture depends see Descriptive Catalogue, and also for prices and quality of vines. It is a large pamphlet of twenty-eight very large pages—double columns, on fine paper, three pages of which are devoted to price-list and business matters, and the remainder to the facts and conditions pertaining to grape culture, which are of interest to all who desire to know what good grapes are, and how to obtain them. It has been prepared with extreme care, and is intended to answer fully and fairly every question that may be asked concerning the best course to obtain the advantages and profit from grapes for the family and for market.

TABLE OF CONTENTS.

To correspondents and buyers, giving a full account of the Iona establishment, which is not only much the oldest but many times larger than any other of the kind in the world. Proposal to sell to clubs at wholesale prices. Classification of our hardy vines, describing and exhibiting their relative importance, with full, and precise account of the qualities and properties of each. History of the new seedlings Iona and Isabella. Letters from Peter B. Mead, giving impressions, characteristics, and with minute analysis of the qualities of the Iona and Delaware, which are justly pronounced by him “THE BEST GRAPES IN CULTIVATION.” How to keep grapes in winter, with engravings how it may be easily and efficiently done. The quality of vines as affected by the age of plants, and different modes of propagation and the economy of the different kinds to purchasers, with many engravings. The value of plants according to the method of propagation, showing how and what plants to use for clothing the trellis the first season, and obtaining an immediate production of fruit. Selection of varieties to plant for table and for family use, with the considerations which determine the proper choice. Tables of selections for different latitudes for any number of plants, from six vines for a small yard to one hundred vines for a family supply. Table of selections by Mr. Mead, with the considerations which influence his choice in a selection of one hundred. Selections for vineyards for wine and for the table for latitude of New-York by Peter B. Mead. Is C. W. Grant influenced by interest in the selection of kinds? Valuable and interesting extracts from letters. Quality of grapes and education of taste, by R. G. Fardey. The “Conditions of Success in Grape Culture,” a lecture by Peter B. Mead. The value of plants as affected by age. Importance of transplanting and root pruning, if vines are more than one year old, illustrated by engravings. How to avoid checks of growth to bearing vines by transplanting. Are vines from single eyes, if well propagated, better than from cuttings? Are vines made tender by propagation under glass? Chapter on wines and wine-making. Many different plans of training shown by many engravings. Quantity produced by different plans. Profit of grape culture. Advertisements of wood for propagation. Strawberry plants. Golden Arbor Vite, and notices of stock of Iona and Isabella vines—of the latter only single plants can be now furnished. Descriptive Catalogue sent for ten cents. Illustrated Catalogue sent for fifteen cents. Both bound in flexible cover thirty-five cents. These together constitute the most complete manual of the vine in the language, and contain more than one hundred of the best engravings of the vine ever published.

C. W. GRANT, Iona, near Peekskill, Westchester Co., New-York.

Grape Vines.

The demand for our vines is rapidly increasing every season. Parties wishing to purchase the coming Spring, would do well to order early, as the demand promises to exceed the supply. Send for Catalogue enclosing stamp.

J. KNOX, Box 153, Pittsburgh, Pa.

CONCORD GRAPE LAYERS at \$12. per 100, or \$110, per 1,000; also, a few hundred 3-year-old transplants, at \$25. per 100. A few hundred 3-year-old Diana Vines, at \$30. per 100. White Grape Currants, 2 and 3 years old, at \$5. per 100, or \$40. per 1,000. GEO. SEYMOUR & CO., South Norwalk, Conn.

Adirondac Grape for Sale.

2 years old, very strong, No. 1.....\$5.00
2 do. strong, No. 2.....4.00
1 do. very strong, No. 3.....3.00
1 do. strong, No. 2.....2.00
All cut back to 3 to 4 eyes.
A discount of 20 per cent to dealers on bills of \$50 and over. The above prices and terms of discount will be strictly adhered to.

NO INFERIOR vines will be sent out by me. Purchasers can rely on the quality of my vines being unsurpassed. Will be forwarded in sealed boxes by Express. No charge for boxes. Or small orders will be securely packed and sent by mail, prepaid, when so ordered.

The two great Grape Exhibitions held last autumn at New York and Cleveland, awarded to the Adirondac THE PRIZE FOR THE

BEST NATIVE GRAPE OF ANY KIND, QUALITY TO RULE.

The discovery and introduction of the Adirondac Grape is an event of the highest importance to fruit growers, and the greatest advance yet attained by native grapes. Its peculiarities are extreme earliness, large berries and clusters, tender and thin skin, melting without any perceptible pulp, and of the most delicious and delicate flavor, reminding one of that splendid but hot-house grape, the “Black Hamburg.” Address JOHN W. BAILEY, Plattsburgh, Clinton Co., N. Y.

The Adirondac Grape Vines,

For sale by the single one or hundred, and every plant WARRANTED GENUINE. Circulars sent free. Single vines sent by mail, postage paid. Price 1 year old \$3. 2 years old EXTRA \$5. “ 2 years “ \$4. 2 years “ \$3. Fine plants Iona, Isabella, Allen's Hybrid, Delaware, &c., &c., &c. Address J. W. CONE, Norfolk, Ct.

Dr. C. W. Grant's Grape Vines

At wholesale and retail. All the New and Valuable Varieties, warranted genuine. Descriptive Catalogue and Price List, illustrated with twenty fine engravings, drawn from life, sent for a three-cent stamp. R. W. HOLTON Agt., 23 John-st., N. Y.

GRAPE VINES.

First class vines of Allen's Hybrid, Concord, Creveling, Delaware, Diana, Hartford Prolific, Iona, Isabella, Rogers' Hybrid, No. 4, 15 and 19, and many other varieties, for sale as low as vines of the same quality can be bought elsewhere.

STRAWBERRY PLANTS.

My stock of Strawberry plants is not large, still I shall sell at the same rates as last season. Triomphe de Gand, Wilson, Boston Pine, Austin, Downer, &c., at \$6. per 1,000. Price catalogues sent free to all applicants.

I have also a fine stock of Raspberries, Currants, Blackberries, &c., &c. A. S. FULLER, Brooklyn, N. Y.

GRAPE VINES.

Concords, Isabellas, Catawbas. A fine lot of vigorous vines 1, 2, and 3 years old, well grown and in bearing. Prices \$1.50 to 75c. each. WM. DEVOE, Paterson, N. J.

Creveling Vines.—1000 Creveling vines for sale, 75c. each, \$8 per doz. F. F. MECHERON, Catawissa, Pa.

GRAPES, GRAPES.

300 Varieties Native, 100 Varieties Foreign. All leading kinds very low, in quantity or retail.

Concord, Hartford Prolific, &c. \$10 per 100, and upwards. Delaware, Diana, &c. \$15 per 100, and upwards. Norton's Virginia, \$20 per 100; strong layers, \$25 to \$30. Oporto, the celebrated hardy wine grape, \$30 per 100 strong layers. Black Glazard and Carter's Favorite (equal to Norton's Va.), \$25 per 100. Good Wine Grapes, such as Carolina Blue Musk, Franklin, Hunterville, Baxter, Northern Muscadine, Ohio Prolific, Clinton, &c., &c. strong layers, \$10 per 100. Perkins, \$20 per 100. Send for retail price list. PRINCE & CO., Flushing, N. Y.

Trees! Trees! Trees!

Rare chances for large sized Apple trees. 100,000 Apple trees six to eight and ten feet high, of the most approved sorts for Southern and Central Pennsylvania, with varieties to suit all latitudes and localities, at prices very reasonable for the quality of trees to be sent out.

Beware of impostors. No traveling agents recognized unless they hold an authority from the proprietor. Address DAVID MILLER, JR., Cumberland Nurseries, Carlisle, Pa.

Bloomington Nursery, Illinois.

160 acres, 12th year. APPLE, 1 to 4 years, largest and best stock ever offered. 75,000 PEARS, GRAPES, 40 sorts. APPLE ROOT GRAFTS, packed, 10,000 \$70. APPLE and PEACH SEEDS. NURSERY STOCKS. EVERGREENS, 15 acres. 30,000 BIRCH, ELM, LARCH, MAPLE, TULIP, and CUCUMBER TREES. ROSES, SHRUBS, BULBS, &c. GRAY or WHITE WILLOW CUTTINGS, true, packed, 1,000, \$3.50; 10,000, \$28. Send red stamp for New Catalogues. Agents and experienced workmen wanted. F. K. PHOENIX, Bloomington, Ill.

Nurseries of Asa Clement

on the Mammoth-road, Dracut, 3 1/2 miles from Lowell, Post Office address “Lowell Mass.”

Apple trees in variety, from one to ten years grown, on bud. Cherry, Peach and Plum trees. Standard and Dwarf Pears in variety. 3000 Concord Grape Vines 2 to 4 years grown. Diana, Delaware, Hartford Prolific, Dracut Amber, No. 15 and 19 Rogers Hybrid, Arbor Vite, Pyramids and hedge plants. Deciduous and Evergreen ornamental trees, in fine condition. Orders solicited and promptly attended to.

Native Evergreens.

The following varieties 6 to 12 inches high at \$5 per 1000. Arbor Vite, Hemlock, White Pine, Balsam Fir, White Spruce, and Larch. Packing free. JAMES A. ROOT, Skaneateles, N. Y.

Choice Pear and Apple Trees.

I have a large stock of Dwarf Pear and Standard Apple trees of superior quality, and the most desirable market varieties, with a general assortment of other trees and plants, at reasonable prices. T. G. YEOMANS, Walworth, Wayne Co., N. Y.

PRINCE & CO., Flushing, N. Y.

LINNEAN BOTANIC NURSERIES: FOUNDED 1792.

Fruit and Ornamental Trees, Small Fruits (an immense variety), Shrubs, Vines, Plants, Grapes, Bulbs, &c. Extra sized Trees for immediate bearing. Send for Catalogues of any Department, enclosing stamps. Pawpaw Trees for sale, singly or by dozen. Also, Madaira and other Nut Trees. PRINCE & CO., Flushing, N. Y.

Sweet Potato Plants.

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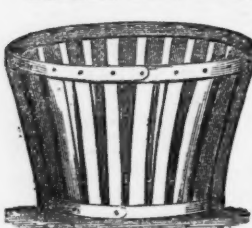
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